



SEQUENCE LISTING

<110> Burgess et al.

<120> Novel Proteins and Nucleic / Acids Encoding Same

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<140> 09/939,853

<141> 2001-08-27

<150> 60/228,191

<151> 2000-08-25

<150> 60/267,300

<151> 2001-02-08

<150> 60/269,961

<151> 2001-02-20

<150> 60/277,337

<151> 2001-03-20

<160> 159

<170> PatentIn Ver. 2.1

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<211> 1011

<212> PRT

<213> Ciona intestinalis

<400> 13

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Leu	Thr	Pro	Asp	Gln	Val	Arg	Tyr	Tyr	Phe	Thr	Ser	Leu	Pro	Glu	Asp	
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Lys	Val	Pro	Leu	Val	Asp	Ser	Ile	Gly	Asp	Lys	Tyr	Arg	Val	Arg	Gln	
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Leu	Leu	His	Gln	Leu	Pro	Pro	His	Asp	Asp	Lys	Val	Cys	Tyr	Cys	Asn	
	115						120					125				
Asp	Leu	Ser	Asp	Glu	Glu	Lys	Arg	Glu	Leu	Arg	Leu	Phe	Ser	Glu	Gln	
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Arg	Lys	Lys	Asp	Tyr	Leu	Gly	Cys	Gly	Lys	Ile	Arg	Ile	Leu	Pro	Leu	
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Gly	Asp	Ile	Val	Ala	Val	Ala	Ser	Arg	Ala	Glu	Pro	Gly	Met	Cys	Trp	
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His	Pro	Ala	Cys	Phe	Val	Cys	Ser	Val	Cys	Arg	Glu	Leu	Leu	Val	Asp	
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Ser	Asp	Glu	Cys	Thr	Glu	Ala	Glu	Gly	Arg	His	Trp	His	Met	Asp	His	
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Phe	Cys	Cys	Phe	Glu	Cys	Asp	Gln	Val	Leu	Gly	Gly	Gln	Arg	Tyr	Ile	
			260					265					270			
Met	Arg	Asp	Gly	Lys	Pro	Asn	Cys	Thr	Gln	Cys	Phe	Glu	Ala	Leu	Tyr	
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Ala Glu Tyr Cys Asp Met Cys Gly Asp Leu Ile Gly Leu Asp Ala Gly
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 Gln Met Gln Tyr Glu Gly Gln His Trp His Ala Thr Asp Asn Cys Phe
 305 310 315 320
 Cys Cys Asn Arg Cys Arg Lys Ser Leu Leu Gly Arg Pro Phe Leu Pro
 325 330 335
 Lys His Gly Arg Ile Phe Cys Ser Lys Ala Cys Ser Leu Gly Glu Asp
 340 345 350
 Pro Gly His Ser Glu Ser Asp Ser Gln His Ser Ser Ser Gln Tyr Glu
 355 360 365
 Asn Pro Gln Leu Pro Thr Ser His Asn Val Arg Arg Ser Leu Asn Leu
 370 375 380
 Asp Asn Leu Ser Ile His Asp Lys Pro Trp Glu Asp Lys Gly Glu Leu
 385 390 395 400
 Ser Pro Ala Ser Asn Asn Val Phe Ile Asp Ala Ala Asp Met Tyr Pro
 405 410 415
 Thr Ser Ala Ala Val Ala Ala Ser Thr Arg Tyr Ser Lys Gly His Thr
 420 425 430
 Arg Pro Ser His Pro Tyr Leu Asp Gly Met Asp Pro Val Asn Ala Glu
 435 440 445
 Met Val Thr Glu Asn Asp Ala Gly Phe Lys Gly Ala Ala Thr Ser Arg
 450 455 460
 Lys Thr Val Thr Asp Ser Val Thr Ser Pro Thr Ser Thr Val Ser Ser
 465 470 475 480
 Arg Thr Thr Ser Lys Asn Gly Val Gln Phe Pro Gln Asn Thr Tyr Asn
 485 490 495
 Ser Thr Asp Ser Ser Gly Tyr Asn Ser Ser Ser Thr Leu Asp Ala Ile
 500 505 510
 Glu His Gln Gln Asn Ala Ala Leu Lys Ala Ala Met Gly Ser Asn Tyr
 515 520 525
 Ser Tyr Gly Lys Ser Lys Gln Thr Pro Cys Ser Lys Arg Pro Gln Asn
 530 535 540
 Gly Glu Asp Gly His Val Ser Ala Thr Glu Phe Thr Pro Phe His Pro
 545 550 555 560
 Ala Ala Pro Arg Ala Ser Pro Pro Thr Ile Ile Gly Ser Arg Lys Leu
 565 570 575
 Ala Pro Glu Ile Lys Lys Thr Ile Asp Ser Leu Thr Lys Ala Thr Glu
 580 585 590

Ile	Asp	Asn	Lys	Ser	Pro	Pro	Val	Asn	Val	Ala	Ser	Met	Leu	Pro	Lys	595	600	605
Ser	Ala	Val	Pro	Ile	Pro	Ala	Pro	Arg	Ala	Arg	Tyr	Ala	Pro	Ser	Leu	610	615	620
Thr	Pro	Ser	Pro	Pro	Ser	Thr	Ala	Ala	Ser	Glu	Leu	Thr	Ser	Pro	Trp	625	630	635
Met	His	Lys	Ser	His	Ala	Arg	Thr	Asp	Ser	Pro	Pro	Asp	Ser	Arg	Glu	645	650	655
Phe	Pro	Ser	Pro	Pro	Val	Pro	Val	Arg	Ser	Pro	Pro	Thr	Glu	Ser	Lys	660	665	670
Glu	His	Ser	Ser	Pro	Leu	Gln	Arg	Ser	Val	Ser	Glu	Arg	Leu	Ala	Asn	675	680	685
Lys	Arg	Arg	Ser	Arg	Glu	Pro	Ile	Ser	Leu	Pro	Glu	Gln	Thr	Ile	Ser	690	695	700
Glu	His	Pro	Arg	Leu	Arg	Ser	Asp	Asp	Lys	His	Val	Ser	Val	Glu	Asn	705	710	715
Asp	Lys	Thr	Ser	Pro	Glu	Leu	Lys	Ser	Ile	Leu	Lys	Lys	Ser	Arg	Asn	725	730	735
Pro	Ser	Lys	Ser	Phe	Arg	Asn	Arg	Glu	Arg	Gly	Ser	Leu	Ser	Gly	Ser	740	745	750
Leu	Asp	Arg	Leu	Glu	Glu	Phe	His	Arg	Lys	Ser	Asp	Val	Met	Lys	Tyr	755	760	765
Ala	Ser	Asp	Asp	Glu	Asp	Gly	Ala	Gly	Phe	Gly	Asp	Ala	Gln	Gly	Asp	770	775	780
Phe	Ser	Ser	Phe	Gln	Arg	Gly	Gln	Arg	Leu	Tyr	Ser	Ser	Ala	Arg	Phe	785	790	795
Pro	Glu	Glu	Val	Thr	Glu	Lys	Pro	Arg	Ser	Gln	Asn	Gln	Gly	Gly	Arg	805	810	815
Pro	Arg	Ser	Gln	His	Arg	Thr	Arg	Phe	Lys	Asp	Asn	Ser	Ala	Leu	Asp	820	825	830
Arg	Thr	His	Ser	Ala	Leu	Asn	Leu	Asp	Glu	Leu	Asp	Cys	Ala	Ile	Ala	835	840	845
Arg	Arg	Asn	Pro	Lys	Pro	Gly	Lys	Thr	Cys	Ser	Lys	Leu	Ser	Gly	Lys	850	855	860
Ser	Thr	Cys	Ser	Lys	Lys	Leu	Lys	Arg	Thr	Arg	Ser	Thr	Asp	Phe	Ala	865	870	875
Phe	Glu	Arg	Ser	Ala	Ala	Thr	Pro	Thr	Ser	Ser	Arg	Lys	Asn	Arg	Arg	885	890	895

Thr Lys Arg Phe Val Glu Asp Glu Glu Glu Asp Gly Trp Cys Ser Thr
 900 905 910

Cys Thr Ser Ser Asn Asp Asp Ser Asp Tyr Glu Arg Trp Asp Gly Leu
 915 920 925

Gly Thr Ser Pro Pro Thr Ser Pro Leu Ser Ala Met Arg Arg Gly Ser
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Ala Pro Val Gly Val Arg Val Asn Met Thr Arg Arg Gln Pro Pro His
 945 950 955 960

Pro Phe Leu Ala Asn Ala Asp Ser Ala Leu Ala Ala Ser Ala Ala Gly
 965 970 975

Phe Asn Ser Asn Gly Val Tyr Arg Pro Ser Met Pro Arg Asn Phe Ser
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Thr Thr Ser His Met Arg Tyr Arg Arg Arg Gln Gln Lys Lys His Cys
 995 1000 1005

Ile Val Met
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<211> 1066

<212> PRT

<213> Ciona intestinalis

<400> 14

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Arg Gly Pro Thr Glu Asn Arg Val Arg Arg Arg Gln Ser Arg Arg Gln
 35 40 45

Ala Ser Val Arg His Asn Arg Asn Ser Ala Ser Asp Glu Glu Asn Asp
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Gly Asp Ser Gly Cys Ala Leu Glu Glu Tyr Ala Trp Val Pro Pro Asn
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Lys Val Pro Leu Val Asp Ser Ile Gly Asp Lys Tyr Arg Val Arg Gln
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Leu Leu His Gln Leu Pro Pro His Asp Asp Lys Val Cys Tyr Cys Asn
 115 120 125

Asp Leu Ser Asp Glu Glu Lys Arg Glu Leu Arg Leu Phe Ser Glu Gln

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Asn Thr Pro Gly Thr Pro Cys Ser Glu Cys Gly Ile Leu Val Lys Gly 165 170 175		
Gly Asp Ile Val Ala Val Ala Ser Arg Ala Glu Pro Gly Met Cys Trp 180 185 190		
His Pro Ala Cys Phe Val Cys Ser Val Cys Arg Glu Leu Leu Val Asp 195 200 205		
Leu Phe Tyr Phe Tyr Gln Asp Gly Arg Leu Tyr Cys Gly Arg His His 210 215 220		
Ala Glu Thr Leu Lys Pro Arg Cys Ser Ala Cys Asp Glu Ile Ile Phe 225 230 235 240		
Ser Asp Glu Cys Thr Glu Ala Glu Gly Arg His Trp His Met Asp His 245 250 255		
Phe Cys Cys Phe Glu Cys Asp Gln Val Leu Gly Gly Gln Arg Tyr Ile 260 265 270		
Met Arg Asp Gly Lys Pro Asn Cys Thr Gln Cys Phe Glu Ala Leu Tyr 275 280 285		
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Gln Met Gln Tyr Glu Gly Gln His Trp His Ala Thr Asp Asn Cys Phe 305 310 315 320		
Cys Cys Asn Arg Cys Arg Lys Ser Leu Leu Gly Arg Pro Phe Leu Pro 325 330 335		
Lys His Gly Arg Ile Arg Cys Ser Lys Ala Cys Ser Leu Gly Glu Asp 340 345 350		
Pro Gly His Ser Glu Ser Asp Ser Gln His Ser Ser Ser Gln Tyr Glu 355 360 365		
Asn Pro Gln Leu Pro Thr Ser His Asn Val Arg Arg Ser Leu Asn Leu 370 375 380		
Asp Asn Leu Ser Ile His Asp Lys Pro Trp Glu Asp Lys Gly Glu Leu 385 390 395 400		
Ser Pro Ala Ser Asn Asn Val Phe Ile Asp Ala Ala Asp Met Tyr Pro 405 410 415		
Thr Ser Ala Ala Val Ala Ala Ser Thr Arg Tyr Ser Lys Gly His Thr 420 425 430		
Arg Pro Ser His Pro Tyr Leu Asp Gly Met Asp Pro Val Asn Ala Glu		

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Glu	His	Gln	Gln	Asn	Ala	Ala	Leu	Lys	Ala	Ala	Met	Gly	Ser	Asn	Tyr
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Ala	Pro	Glu	Ile	Lys	Lys	Thr	Ile	Asp	Ser	Leu	Thr	Lys	Ala	Thr	Glu
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Pro	Ser	Lys	Ser	Phe	Arg	Asn	Arg	Glu	Arg	Gly	Ser	Leu	Ser	Gly	Ser

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Pro	Asn	Ala	Gln	Arg	Ser	Gln	Phe	Arg	Glu	Gln	Lys	Leu	Glu	Leu	Asp
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Cys	Ala	Ile	Ala	Arg	Arg	Asn	Pro	Lys	Pro	Gly	Lys	Thr	Cys	Ser	Lys
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Leu	Ser	Gly	Lys	Ser	Thr	Cys	Ser	Lys	Lys	Leu	Lys	Arg	Thr	Arg	Ser
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Thr	Asp	Phe	Ala	Phe	Glu	Arg	Ser	Ala	Ala	Thr	Pro	Thr	Ser	Ser	Arg
				885					890						895
Lys	Asn	Arg	Arg	Thr	Lys	Arg	Phe	Val	Glu	Asp	Glu	Glu	Glu	Asp	Gly
			900					905						910	
Trp	Cys	Ser	Thr	Cys	Thr	Ser	Ser	Ser	Asp	Asp	Ser	Asp	Tyr	Glu	Arg
	915						920					925			
Trp	Asp	Gly	Leu	Gly	Thr	Ser	Pro	Pro	Thr	Ser	Pro	Leu	Ser	Ala	Met
	930					935					940				
Arg	Arg	Gly	Ser	Ala	Pro	Val	Gly	Val	Arg	Val	Asn	Met	Thr	Arg	Arg
945					950					955					960
Gln	Pro	Pro	His	Pro	Phe	Leu	Ala	Asn	Ala	Asp	Ser	Ala	Leu	Ala	Ala
			965						970						975
Ser	Ala	Ala	Gly	Phe	Asn	Ser	Asn	Gly	Val	Tyr	Arg	Pro	Ser	Met	Pro
			980					985					990		
Arg	Asn	Phe	Phe	Phe	His	His	Val	Ala	Tyr	Ala	Leu	Gln	Ala	Glu	Thr
	995						1000					1005			
Ala	Glu	Lys	Ala	Leu	Tyr	Arg	His	Val	Thr	Thr	Asn	Ala	Val	Thr	Lys
	1010					1015					1020				
Thr	Ser	Glu	Ile	Asp	Arg	Lys	Ser	Ser	Glu	Thr	Lys	Ser	Trp	Arg	Ser
1025				1030						1035					1040
Gln	Asp	Ala	Ser	Tyr	Leu	Pro	Arg	Gly	Gly	Ser	Lys	Ala	Arg	Glu	Ser

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Ala Pro Ile Val Asp Thr Asn Thr Ser Ala		
1060	1065	
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<400> 15		
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Ser Tyr Tyr Thr Gln Thr Glu Ser Glu Leu Leu Gln Ile Glu Ala Gly		
	20	25 30
Gly Thr Gly Leu Thr Phe Ala Ser His Ser Gln Arg Pro Glu Ser Ala		
	35	40 45
Ile Ser Gln Val Ala Ser Thr Ala His Leu Asp Val Pro Ser Ala Ala		
	50	55 60
Ser Ser Gly Ser Gly Gly Ser Ala Val Ser Gly Gly Ser Gly Gly Ala		
65	70	75 80
Pro Glu Ser Ala Gly Arg Phe Val Ser Pro Leu Gln Arg Arg His Cys		
	85	90 95
Gln Pro Pro Ser His Leu Pro Leu Asn Ser Val Ala Ser Pro Leu Arg		
	100	105 110
Thr Ala Ser Tyr Lys Ser Ala Ala Ala Val Ala Gly His Gly Phe His		
	115	120 125
His Ser His His Gln Gln Leu Asp Phe Gln Arg Asn Ser Gln Ser Asp		
	130	135 140
Asp Asp Ser Gly Cys Ala Leu Glu Glu Tyr Thr Trp Val Pro Pro Gly		
145	150	155 160
Leu Arg Pro Asp Gln Val Arg Leu Tyr Phe Ser Gln Leu Pro Asp Asp		
	165	170 175
Lys Val Pro Tyr Val Asn Ser Pro Gly Glu Lys Tyr Arg Val Lys Gln		
	180	185 190
Leu Leu His Gln Leu Pro Pro Gln Asp Asn Glu Val Arg Tyr Cys His		
	195	200 205
Ser Leu Ser Asp Glu Glu Arg Lys Glu Leu Arg Ile Phe Ser Ala Gln		
	210	215 220
Arg Lys Arg Glu Ala Leu Gly Arg Gly Ala Val Arg Leu Leu Ser Asp		
225	230	235 240

Glu	Arg	Pro	Cys	Lys	Gly	Cys	Glu	Glu	Pro	Leu	Ser	Gly	Gly	Asp	Ile		
				245					250					255			
Val	Val	Phe	Ala	Gln	Arg	Leu	Gly	Ala	Gln	Leu	Cys	Trp	His	Pro	Gly		
			260					265					270				
Cys	Phe	Val	Cys	Ser	Val	Cys	Lys	Glu	Leu	Leu	Val	Asp	Leu	Ile	Tyr		
		275					280					285					
Phe	Gln	Arg	Asp	Gly	Asn	Leu	Tyr	Cys	Gly	Arg	His	His	Ala	Glu	Thr		
	290					295					300						
Gln	Lys	Pro	Arg	Cys	Ser	Ala	Cys	Asp	Glu	Ile	Ile	Phe	Ser	Asp	Glu		
305					310					315					320		
Cys	Thr	Glu	Ala	Glu	Gly	Arg	Thr	Trp	His	Met	Lys	His	Phe	Ala	Cys		
				325					330					335			
Gln	Glu	Cys	Glu	His	Gln	Leu	Gly	Gly	Gln	Arg	Tyr	Ile	Met	Arg	Glu		
			340					345					350				
Gly	Lys	Pro	Tyr	Cys	Leu	Ala	Cys	Phe	Asp	Thr	Met	Phe	Ala	Glu	Tyr		
	355						360					365					
Cys	Asp	Tyr	Cys	Gly	Glu	Val	Ile	Gly	Val	Asp	Gln	Gly	Gln	Met	Ser		
	370					375					380						
His	Asp	Gly	Gln	His	Trp	His	Ala	Thr	Asp	Gln	Cys	Phe	Ser	Cys	Cys		
385					390					395					400		
Thr	Cys	Arg	Cys	Ser	Leu	Leu	Gly	Arg	Pro	Phe	Leu	Pro	Arg	Arg	Gly		
				405					410					415			
Thr	Ile	Tyr	Cys	Ser	Ile	Ala	Cys	Ser	Lys	Gly	Glu	Pro	Pro	Thr	Pro		
		420						425					430				
Ser	Asp	Thr	Ser	Ser	Gly	Pro	Gln	Leu	Arg	Pro	Thr	His	Arg	Ala	Ser		
	435					440						445					
Thr	Ser	Ser	Gln	Ile	Ala	Lys	Ser	Pro	Arg	Arg	Gly	Gly	Glu	Arg	Glu		
	450					455					460						
Arg	Asp	Pro	Gly	Arg	Lys	Ala	His	His	Gly	His	Pro	Lys	Ala	Thr	Gly		
465					470				475						480		
Ser	Ala	Gly	Asp	Leu	Leu	Glu	Arg	Gln	Glu	Arg	Gln	Arg	Met	Glu	Ala		
				485				490						495			
Ala	Gly	Val	Ala	Asp	Leu	Leu	Leu	Gly	Gly	Gly	Val	Pro	Gly	Met	Pro		
			500					505					510				
Arg	Pro	Ala	His	Pro	Pro	Pro	Ile	Asp	Leu	Thr	Glu	Leu	Gly	Ile	Ser		
		515					520					525					
Leu	Asp	Asn	Ile	Cys	Ala	Gly	Asp	Lys	Ser	Ile	Phe	Gly	Asp	Thr	Gln		
	530					535					540						

Thr Leu Thr Asn Ser Met Pro Asp Met Leu Leu Ser Lys Ala Asp Asp
 545 550 555 560
 Ser His Ser Tyr Gln Ser Ile Asp Lys Ile Asn Leu Asn Ser Pro Ser
 565 570 575
 Asn Ser Asp Leu Thr Gln Ser Thr Gln Glu Leu Ala Asn Glu Leu Glu
 580 585 590
 Leu Asp Asn Glu Pro Val Arg Glu Leu Pro His Asp Gly Tyr Glu Gln
 595 600 605
 Leu Phe Ala Asn Asn Arg Asn Gln Glu His Pro Ala Glu Gln Tyr Asp
 610 615 620
 Asp Glu Gln Leu Asp Asn Arg Pro Met Lys Glu Val Arg Phe His Ser
 625 630 635 640
 Val Gln Asp Thr Met Ser Arg Ser Lys Ser Tyr Thr Asp Asn Ser Asn
 645 650 655
 Ala Arg Arg Arg Arg Arg Arg Arg Asn Gln Ser Arg Ser Ser Ser Glu
 660 665 670
 Met Gln Ile Asn Gln Thr Asn Leu Arg Leu His Asn Ala Gln Thr Gln
 675 680 685
 Val Gly Thr Thr Pro Leu Asn Leu Leu Asn Asn Leu Asp Asn Cys Asp
 690 695 700
 Val Ala Ser Ile Cys Ser Thr Cys Ser Ser Ser Ser Ser Ser Asp Met
 705 710 715 720
 Asp Asp Tyr Val Tyr Arg Leu Pro Ala Arg Lys His Tyr Gly Gly Val
 725 730 735
 Arg Val Ala Tyr Val Pro Asn Asp Ala Leu Ala Tyr Glu Arg Lys Lys
 740 745 750
 Lys Met Ala Gln Asp Ser Ser Leu Ala Pro Gly Ala Gly Asn Ala Ser
 755 760 765
 Val Gly Gly Ala Pro Ala Ile Met His Glu Ser Lys Asn Cys Thr Ile
 770 775 780

Ser
 785

<210> 16
 <211> 615
 <212> PRT
 <213> Homo sapiens

<400> 16
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Glu Ala Glu Asp Pro Asp Arg Gly Gln Pro Cys Asn Ser Cys Arg Glu
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Gln Cys Pro Gly Phe Leu Leu His Gly Trp Arg Lys Ile Cys Gln His
 35 40 45

Cys Lys Cys Pro Arg Glu Glu His Ala Val His Ala Val Pro Val Asp
 50 55 60

Leu Glu Arg Ile Met Cys Arg Leu Ile Ser Asp Phe Gln Arg His Ser
 65 70 75 80

Ile Ser Asp Asp Asp Ser Gly Cys Ala Ser Glu Glu Tyr Ala Trp Val
 85 90 95

Pro Pro Gly Leu Lys Pro Glu Gln Val Tyr Gln Phe Phe Ser Cys Leu
 100 105 110

Pro Glu Asp Lys Val Pro Tyr Val Asn Ser Pro Gly Glu Lys Tyr Arg
 115 120 125

Ile Lys Gln Leu Leu His Gln Leu Pro Pro His Asp Ser Glu Ala Gln
 130 135 140

Tyr Cys Thr Ala Leu Glu Glu Glu Glu Lys Lys Glu Leu Arg Ala Phe
 145 150 155 160

Ser Gln Gln Arg Lys Arg Glu Asn Leu Gly Arg Gly Ile Val Arg Ile
 165 170 175

Phe Pro Val Thr Ile Thr Gly Ala Ile Cys Glu Glu Cys Gly Lys Gln
 180 185 190

Ile Gly Gly Gly Asp Ile Ala Val Phe Ala Ser Arg Ala Gly Leu Gly
 195 200 205

Ala Cys Trp His Pro Gln Cys Phe Val Cys Thr Thr Cys Gln Glu Leu
 210 215 220

Leu Val Asp Leu Ile Tyr Phe Tyr His Val Gly Lys Val Tyr Cys Gly
 225 230 235 240

Arg His His Ala Glu Cys Leu Arg Pro Arg Cys Gln Ala Cys Asp Glu
 245 250 255

Ile Ile Phe Ser Pro Glu Cys Thr Glu Ala Glu Gly Arg His Trp His
 260 265 270

Met Asp His Phe Cys Cys Phe Glu Cys Glu Ala Ser Leu Gly Gly Gln
 275 280 285

Arg Tyr Val Met Arg Gln Ser Arg Pro His Cys Cys Ala Cys Tyr Glu
 290 295 300

Ala Arg His Ala Glu Tyr Cys Asp Gly Cys Gly Glu His Ile Gly Leu
 305 310 315 320

Asp Gln Gly Gln Met Ala Tyr Glu Gly Gln His Trp His Ala Ser Asp
 325 330 335
 Arg Cys Phe Cys Cys Ser Arg Cys Gly Arg Ala Leu Leu Gly Arg Pro
 340 345 350
 Phe Leu Pro Arg Arg Gly Leu Ile Phe Cys Ser Arg Ala Cys Ser Leu
 355 360 365
 Gly Ser Glu Pro Thr Ala Pro Gly Pro Ser Arg Arg Ser Trp Ser Ala
 370 375 380
 Gly Pro Val Thr Ala Pro Leu Ala Ala Ser Thr Ala Ser Phe Ser Ala
 385 390 395 400
 Val Lys Gly Ala Ser Glu Thr Thr Thr Lys Gly Thr Ser Thr Glu Leu
 405 410 415
 Ala Pro Ala Thr Gly Pro Glu Glu Pro Ser Arg Phe Leu Arg Gly Ala
 420 425 430
 Pro His Arg His Ser Met Pro Glu Leu Gly Leu Arg Ser Val Pro Glu
 435 440 445
 Pro Pro Pro Glu Ser Pro Gly Gln Pro Asn Leu Arg Pro Asp Asp Ser
 450 455 460
 Ala Phe Gly Arg Gln Ser Thr Pro Arg Val Ser Phe Arg Asp Pro Leu
 465 470 475 480
 Val Ser Glu Gly Gly Pro Arg Arg Thr Leu Ser Ala Pro Pro Ala Gln
 485 490 495
 Arg Arg Arg Pro Arg Ser Pro Pro Pro Arg Ala Pro Ser Arg Arg Arg
 500 505 510
 His His His His Asn His His His His His Asn Arg His Pro Ser Arg
 515 520 525
 Arg Arg His Tyr Gln Cys Asp Ala Gly Ser Gly Ser Asp Ser Glu Ser
 530 535 540
 Cys Ser Ser Ser Pro Ser Ser Ser Ser Ser Glu Ser Ser Glu Asp Asp
 545 550 555 560
 Gly Phe Phe Leu Gly Glu Arg Ile Pro Leu Pro Pro His Leu Cys Arg
 565 570 575
 Pro Met Pro Ala Gln Asp Thr Ala Met Glu Thr Phe Asn Ser Pro Ser
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 Asp Lys Asn Cys Ile Val Ala
 610 615

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 <211> 1028
 <212> PRT
 <213> *Drosophila melanogaster*

<400> 17
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 Asn Arg Val Thr Gln Asp Gln Gly Thr Gln Pro Ala Ala Pro Gln Val
 35 40 45
 Pro Leu Gln Pro Leu Thr Ala Gly Asp Leu Gln Phe Leu Asn Leu Ser
 50 55 60
 Leu Arg Gln Arg Ser Leu Pro Arg Ser Met Lys Pro Phe Lys Asp Ala
 65 70 75 80
 His Asp Ile Ser Phe Thr Phe Asn Glu Leu Asp Thr Ser Ala Glu Pro
 85 90 95
 Glu Val Ala Thr Gly Ala Ala Gln Gln Glu Ser Asn Glu Cys Arg Thr
 100 105 110
 Pro Leu Thr Gln Ile Ser Tyr Leu Gln Lys Ile Pro Thr Leu Pro Arg
 115 120 125
 His Phe Ser Pro Ser Gly Gln Gly Leu Ala Thr Pro Pro Ala Leu Gly
 130 135 140
 Ser Gly Gly Met Gly Leu Pro Ser Ser Ser Ser Ala Ser Ala Leu Tyr
 145 150 155 160
 Ala Ala Gln Ala Ala Ala Gly Ile Leu Pro Thr Ser Pro Leu Pro Leu
 165 170 175
 Gln Arg His Gln Gln Tyr Leu Pro Pro His His Gln Gln His Pro Gly
 180 185 190
 Ala Gly Met Gly Pro Gly Pro Gly Ser Gly Ala Ala Ala Gly Pro Pro
 195 200 205
 Leu Gly Pro Gln Tyr Ser Pro Gly Cys Ser Ala Asn Pro Lys Tyr Ser
 210 215 220
 Asn Ala Gln Leu Pro Pro Pro Pro His His His His Gln Leu Ser Pro
 225 230 235 240
 Ala Leu Ser Thr Pro Ser Pro Pro Ser Leu Leu His His Pro Ala Gly
 245 250 255
 Gly Thr Ser Ser Ala Ser Ala His Ala Pro Phe Leu Gly Gly Pro His

260										265					270									
Met	Asp	Met	Gln	Arg	Gln	Ser	His	Ser	Asp	Asp	Asp	Asp	Ser	Gly	Cys	Ala								
275										280					285									
Leu	Glu	Glu	Tyr	Thr	Trp	Val	Pro	Pro	Gly	Leu	Arg	Pro	Asp	Gln	Val									
290										295					300									
Arg	Leu	Tyr	Phe	Ser	Gln	Ile	Pro	Asp	Asp	Lys	Val	Pro	Tyr	Val	Asn									
305										310					315					320				
Ser	Pro	Gly	Glu	Gln	Tyr	Arg	Val	Arg	Gln	Leu	Leu	His	Gln	Leu	Pro									
325										330					335									
Pro	His	Asp	Asn	Glu	Val	Arg	Tyr	Cys	His	Ser	Leu	Thr	Asp	Glu	Glu									
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Arg	Lys	Glu	Leu	Arg	Leu	Phe	Ser	Thr	Gln	Arg	Lys	Arg	Asp	Ala	Leu									
355										360					365									
Gly	Arg	Gly	Asn	Val	Arg	Gln	Leu	Met	Ser	Ala	Arg	Pro	Cys	Asp	Gly									
370										375					380									
Cys	Asp	Asp	Leu	Ile	Ser	Thr	Gly	Asp	Ile	Ala	Val	Phe	Ala	Thr	Arg									
385										390					395					400				
Leu	Gly	Pro	Asn	Ala	Ser	Trp	His	Pro	Ala	Cys	Phe	Ala	Cys	Ser	Val									
405										410					415									
Cys	Arg	Glu	Leu	Leu	Val	Asp	Leu	Ile	Tyr	Phe	His	Arg	Asp	Gly	Arg									
420										425					430									
Met	Tyr	Cys	Gly	Arg	His	His	Ala	Glu	Thr	Leu	Lys	Pro	Arg	Cys	Ser									
435										440					445									
Ala	Cys	Asp	Glu	Ile	Ile	Leu	Ala	Asp	Glu	Cys	Thr	Glu	Ala	Glu	Gly									
450										455					460									
Arg	Ala	Trp	His	Met	Asn	His	Phe	Ala	Cys	His	Glu	Cys	Asp	Lys	Gln									
465										470					475					480				
Leu	Gly	Gly	Gln	Arg	Tyr	Ile	Met	Arg	Glu	Gly	Lys	Pro	Tyr	Cys	Leu									
485										490					495									
His	Cys	Phe	Asp	Ala	Met	Phe	Ala	Glu	Tyr	Cys	Asp	Tyr	Cys	Gly	Glu									
500										505					510									
Ala	Ile	Gly	Val	Asp	Gln	Gly	Gln	Met	Ser	His	Asp	Gly	Gln	His	Trp									
515										520					525									
His	Ala	Thr	Asp	Glu	Cys	Phe	Ser	Cys	Asn	Thr	Cys	Arg	Cys	Ser	Leu									
530										535					540									
Leu	Gly	Arg	Ala	Phe	Leu	Pro	Arg	Arg	Gly	Ala	Ile	Tyr	Cys	Ser	Ile									
545										550					555					560				
Ala	Cys	Ser	Lys	Gly	Glu	Pro	Pro	Thr	Pro	Ser	Asp	Ser	Ser	Gly	Thr									

					565				570						575
Gly	Met	Tyr	Thr	Thr	Pro	Thr	Pro	Pro	Thr	Gln	Arg	Val	Arg	Pro	His
			580					585					590		
Pro	Gln	Ala	Pro	Leu	Pro	Ala	Arg	Ile	Pro	Ser	Ser	His	Ala	Ser	Ser
		595					600					605			
Ser	Pro	Pro	Met	Ser	Pro	Gln	Gln	Gln	Gln	Gln	His	Gln	Ala	Thr	Phe
	610					615					620				
Asn	Gln	Ala	Met	Tyr	Gln	Met	Gln	Ser	Gln	Gln	Met	Glu	Ala	Ala	Gly
625					630					635					640
Gly	Leu	Val	Asp	Gln	Ser	Lys	Ser	Tyr	Ala	Ala	Ser	Asp	Ser	Asp	Ala
				645					650					655	
Gly	Val	Val	Lys	Asp	Leu	Glu	His	Gly	Gly	His	Met	Gly	Gly	Gly	Asp
			660					665					670		
Leu	Thr	Asp	Phe	Ser	Gly	Gly	Arg	Ala	Ser	Ser	Thr	Ser	Gln	Asn	Leu
		675					680					685			
Ser	Pro	Leu	Asn	Ser	Pro	Gly	Asp	Phe	Gln	Pro	His	Phe	Leu	Pro	Lys
	690					695					700				
Pro	Met	Glu	Leu	Gln	Arg	Gln	Leu	Leu	Glu	Asn	Pro	His	Thr	Ala	Ser
705					710					715					720
Met	Pro	Glu	Leu	Ala	Gly	Lys	Leu	Val	Ala	Pro	Pro	Ala	His	Met	Gln
				725					730					735	
His	Leu	Ser	Gln	Leu	His	Ala	Val	Ser	Ser	His	Gln	Phe	Gln	Gln	His
			740					745					750		
Glu	Tyr	Ala	Asp	Ile	Leu	His	Pro	Pro	Pro	Pro	Pro	Pro	Gly	Glu	Ile
		755					760					765			
Pro	Glu	Leu	Pro	Thr	Pro	Asn	Leu	Ser	Val	Ala	Ser	Thr	Ala	Leu	Pro
	770					775					780				
Pro	Glu	Leu	Met	Gly	Ser	Pro	Thr	His	Ser	Ala	Gly	Asp	Arg	Ser	Leu
785					790					795					800
Asn	Thr	Pro	Met	Ser	Thr	Gln	Ser	Ala	Ser	His	Ala	Pro	Pro	His	Pro
				805					810					815	
Val	Ser	Ile	Leu	Ser	Gly	Ala	Ser	Ser	Ser	Ser	Pro	Met	Ser	Gly	Glu
			820					825					830		
Pro	Ala	Lys	Lys	Lys	Gly	Val	Arg	Phe	Glu	Gly	Ile	Pro	Asp	Thr	Leu
		835					840					845			
Pro	Arg	Ser	Arg	Ser	Tyr	Ser	Gly	Asn	Gly	Ala	Gly	Thr	Ser	Gly	Gly
	850					855					860				
Gly	Glu	Arg	Glu	Arg	Asp	Arg	Asp	Lys	Asp	Lys	Glu	Gly	Gly	Gly	Arg

865 870 875 880
 His Gly His Gly His Ser Ser Arg Arg Arg Arg Arg Arg Lys Ser Ser
 885 890 895
 Ser Ser Ser Ser His His Arg Ser Gly Ser Gly His Arg Ser His Ser
 900 905 910
 Thr Thr Arg Ala Asp Thr Tyr Ala Pro Ala Gln Pro Leu Ser Ser Ser
 915 920 925
 Tyr Gln Gly Pro Pro Ser Val Leu Gln Ala Ala Asn Leu Val His Glu
 930 935 940
 Ser Pro Ser Arg Gln Gln Arg Glu Arg Glu Arg Glu Arg Glu Arg Glu
 945 950 955 960
 Glu Ser Glu Glu Ser Asp Val Cys Ser Thr Cys Ser Ser Ser Ser Ser
 965 970 975
 Ser Ser Glu Asp Tyr Met Met Met Tyr Gln Leu Pro Gln Arg Arg His
 980 985 990
 Tyr Gly Gly Val Arg Val Ser Tyr Val Pro Asn Asp Ala Leu Ala Tyr
 995 1000 1005
 Asp Arg Lys Arg Lys Pro Ser Glu Leu Gly Gly Asp Lys Asp Lys Asn
 1010 1015 1020
 Cys Ile Ile Ser
 1025

<210> 18
 <211> 1278
 <212> DNA
 <213> Homo sapiens

<400> 18
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 tctgttcccc gcccggttgt cctcgccctg ctgcgctgag tgtcccctgt tagcctcgac 180
 cccatggcgc tgcagacgct gcagagctcg tgggtgacct tccgcaagat cctgtctcac 240
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 ccagttcag accagaagaa tgctatgctg gactttgtgt tcacagtaga tgacctgtc 360
 gcatggcatt caaagaacct gaagaaaaat tggagtcact actctttcct aaaagtttta 420
 gggcccaaga ttatcacgtc catccagaat aactatggcg ctggagttaa ctacaattca 480
 ttgatcatgt gtaatggtag gcttatcaaa tatggagtta ttagcactaa cgttctgatt 540
 gaagatctcc tcaactggaa taacttatac attgctggac gactccaaaa accggtgaaa 600
 attatctcag tgaacgagga tgtcactctt agatcagccc tcgatagaaa tctgaagagt 660
 gctgtgaccg ctgctttcct catgctcccc gaaagctttt ctgaagaaga cctcttcata 720
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 aaagtgttga atattgtgaa gcccaatata gcccactttc gagagctcta tggcagcata 840
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 agcccagaag gacagttcac tcagctgatg acattgcccc aaaccttaca gcaacagata 960
 aatcatatta tggaccctcc tggaaaaaac agagatgtgg aagaaacttt attccaagtg 1020
 gctcatgatc ccgactgtgg agatgtggtg cgactagggc tttcagcaat cgtgagaccg 1080

tctagtataa gacagagcac gaaaggcatt tttactgctg gcctgaagaa gtcagtgatt 1140
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 aaaaaaaaaa aaaaaaaaaa 1278

<210> 19

<211> 337

<212> PRT

<213> Homo sapiens

<400> 19

Met Ala Leu Gln Thr Leu Gln Ser Ser Trp Val Thr Phe Arg Lys Ile
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Leu Ser His Phe Pro Glu Glu Leu Ser Leu Ala Phe Val Tyr Gly Ser
 20 25 30

Gly Val Tyr Arg Gln Ala Gly Pro Ser Ser Asp Gln Lys Asn Ala Met
 35 40 45

Leu Asp Phe Val Phe Thr Val Asp Asp Pro Val Ala Trp His Ser Lys
 50 55 60

Asn Leu Lys Lys Asn Trp Ser His Tyr Ser Phe Leu Lys Val Leu Gly
 65 70 75 80

Pro Lys Ile Ile Thr Ser Ile Gln Asn Asn Tyr Gly Ala Gly Val Tyr
 85 90 95

Tyr Asn Ser Leu Ile Met Cys Asn Gly Arg Leu Ile Lys Tyr Gly Val
 100 105 110

Ile Ser Thr Asn Val Leu Ile Glu Asp Leu Leu Asn Trp Asn Asn Leu
 115 120 125

Tyr Ile Ala Gly Arg Leu Gln Lys Pro Val Lys Ile Ile Ser Val Asn
 130 135 140

Glu Asp Val Thr Leu Arg Ser Ala Leu Asp Arg Asn Leu Lys Ser Ala
 145 150 155 160

Val Thr Ala Ala Phe Leu Met Leu Pro Glu Ser Phe Ser Glu Glu Asp
 165 170 175

Leu Phe Ile Glu Ile Ala Gly Leu Ser Tyr Ser Gly Asp Phe Arg Met
 180 185 190

Val Val Gly Glu Asp Lys Thr Lys Val Leu Asn Ile Val Lys Pro Asn
 195 200 205

Ile Ala His Phe Arg Glu Leu Tyr Gly Ser Ile Leu Gln Glu Asn Pro
 210 215 220

Gln Val Val Tyr Lys Ser Gln Gln Gly Trp Leu Glu Ile Asp Lys Ser
 225 230 235 240

Pro Glu Gly Gln Phe Thr Gln Leu Met Thr Leu Pro Lys Thr Leu Gln
245 250 255

Gln Gln Ile Asn His Ile Met Asp Pro Pro Gly Lys Asn Arg Asp Val
260 265 270

Glu Glu Thr Leu Phe Gln Val Ala His Asp Pro Asp Cys Gly Asp Val
275 280 285

Val Arg Leu Gly Leu Ser Ala Ile Val Arg Pro Ser Ser Ile Arg Gln
290 295 300

Ser Thr Lys Gly Ile Phe Thr Ala Gly Leu Lys Lys Ser Val Ile Tyr
305 310 315 320

Ser Ser Leu Lys Leu His Lys Met Trp Lys Gly Trp Leu Arg Lys Thr
325 330 335

Ser

<210> 20
<211> 1278
<212> DNA
<213> Homo sapiens

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cagtttttagt gaactataaa tctactgactt cttcaggcca gcagtaaaaa tgcctttcgt 180
gctctgtctt atactagacg gtctcacgat tgctgaaagc cctagtcgca ccacatctcc 240
acagtcggga tcatgagcca cttggaataa agtttcttcc acatctctgt tttttccagg 300
agggtccata atatgattta tctgttgctg taaggttttg ggcaatgtca tcagctgagt 360
gaactgtcct tctgggcttt tatctatctc cagccagcct tgctggcttt tatacaccac 420
ttgaggattt tctgttagta tgctgccata gagctctcga aagtgggcta tattgggctt 480
cacaatattc aacacttttg ttttatcttc tccaaccacc atccgaaagt cacctgaata 540
ggagagaccg gcaatctcta tgaagaggtc ttcttcagaa aagctttcgg ggagcatgag 600
gaaagcagcg gtcacagcac tcttcagatt tctatcgagg gctgatctaa gagtgacatc 660
ctcgttcact gagataaatt tcaccggttt ttggagtcgt ccagcaatgt ataagttatt 720
ccagttgagg agatcttcaa tcagaacggt agtgctaata actccatatt tgataagcct 780
accattacac atgatcaatg aattgtagta aactccagcg ccatagttat tctggatgga 840
cgtgataatc ttgggcccta aaacttttag gaaagagtag tgactccaat ttttcttcag 900
gttctttgaa tgccatgcga cagggtcatc tactgtgaac acaaagtcca gcatagcatt 960
cttctggctt gaactgggcc ctgcctggcg gtacaccccg gagccgtaga cgaaagccag 1020
actcagctcc tcggggaagt gagacaggat cttgcggaag gtcaccacag agctctgcag 1080
cgtctgcagc gccatggggt cgaggctaac aggggacact cagcgcagca gggcgaggac 1140
aaccgggagg ggaacagaca ccgggtaggc gggttagggg gggaaatgga agtcggagac 1200
tgatcgagg gacacaaggc tgagtgtggg gtgggactgc aaggacacgc aaggattggg 1260
gcgttgggcc acgaagag 1278

<210> 21
<211> 367
<212> PRT
<213> Mus musculus

<400> 21

Gly Thr Gly Arg Lys Arg Gly Pro His Asp Arg Glu Leu Arg Ala Gln
1 5 10 15

Gly Arg His Ser Thr Val Cys Pro Thr Gly Gly Pro Pro Ala His Gly
20 25 30

Ala Ala Gly Leu His Ser Ser Gly Val Gly Leu Arg Arg Ile Leu Ala
35 40 45

His Phe Pro Glu Asp Leu Ser Leu Ala Phe Ala Tyr Gly Ser Ala Val
50 55 60

Tyr Arg Gln Ala Gly Pro Ser Ala His Gln Glu Asn Pro Met Leu Asp
65 70 75 80

Leu Val Phe Thr Val Asp Asp Pro Val Ala Trp His Ala Met Asn Leu
85 90 95

Lys Lys Asn Trp Ser His Tyr Ser Phe Leu Lys Leu Leu Gly Pro Arg
100 105 110

Ile Ile Ser Ser Ile Gln Asn Asn Tyr Gly Ala Gly Val Tyr Phe Asn
115 120 125

Pro Leu Ile Arg Cys Asp Gly Lys Leu Ile Lys Tyr Gly Val Ile Ser
130 135 140

Thr Gly Thr Leu Ile Glu Asp Leu Leu Asn Trp Asn Asn Leu Tyr Ile
145 150 155 160

Ala Gly Arg Leu Gln Lys Pro Val Lys Ile Val Ser Met Asn Glu Asn
165 170 175

Met Ala Leu Arg Ala Ala Leu Asp Lys Asn Leu Arg Ser Ala Val Thr
180 185 190

Thr Ala Cys Leu Met Leu Pro Glu Ser Phe Ser Glu Glu Asp Leu Phe
195 200 205

Ile Glu Ile Ala Gly Leu Ser Tyr Ser Gly Asp Phe Arg Met Val Ile
210 215 220

Gly Glu Glu Lys Ser Lys Val Leu Asn Ile Val Lys Pro Asn Val Gly
225 230 235 240

His Phe Arg Glu Leu Tyr Glu Ser Ile Leu Gln Lys Asp Pro Gln Val
245 250 255

Val Tyr Lys Met His Gln Gly Gln Leu Glu Ile Asp Lys Ser Pro Glu
260 265 270

Gly Gln Phe Thr Gln Leu Met Thr Leu Pro Arg Thr Leu Gln Gln Gln
275 280 285

Ile Asn His Ile Met Asp Pro Pro Gly Arg Asn Arg Asp Val Glu Glu
290 295 300

Thr Leu Leu Gln Val Ala Gln Asp Pro Asp Cys Gly Asp Val Val Arg
 305 310 315 320

Leu Ala Ile Ser Ser Ile Val Arg Pro Ser Ser Ile Arg Gln Ser Thr
 325 330 335

Lys Gly Leu Phe Thr Ala Gly Met Lys Lys Ser Val Ile Tyr Ser Ser
 340 345 350

Arg Lys Leu Asn Lys Met Trp Lys Gly Trp Met Ser Lys Ala Ser
 355 360 365

<210> 22

<211> 383

<212> PRT

<213> Schizosaccharomyces pombe

<400> 22

Met Ile Phe Gly Lys Thr His Phe Leu Ser Tyr Asn Ile Leu Arg Tyr
 1 5 10 15

Ser Thr Lys Arg Trp Met Asn Arg His Ser Tyr Ser His His Ala Lys
 20 25 30

Cys Thr Val Ala Gln Leu Leu Lys Gln Asn Leu Leu Thr Phe Glu Asn
 35 40 45

Gln Arg Ile Gln Pro Glu Glu Glu Leu Lys Glu Asn Leu Thr Lys Val
 50 55 60

Val Asn Tyr Phe Gln Ala Pro Ile Asp Val Ala Val Gly Tyr Gly Ser
 65 70 75 80

Gly Val Phe Arg Gln Ala Gly Tyr Ser Gln Lys Glu Asn Pro Met Ile
 85 90 95

Asp Phe Ile Phe Gln Val Glu Asp Pro Val Lys Trp His Lys Ile Asn
 100 105 110

Leu Gln Gln Asn Pro Ser His Tyr Ser Phe Val Lys Asn Phe Gly Pro
 115 120 125

Gly Phe Val Ser Thr Leu Gln Glu Ser Phe Gly Thr Gly Val Tyr Tyr
 130 135 140

Asn Thr His Val Glu Val Glu Gly Asn Ile Ile Lys Tyr Gly Val Thr
 145 150 155 160

Ser Lys Lys Asp Val Tyr Glu Asp Leu Lys Asn Trp Asn Thr Met Tyr
 165 170 175

Leu Ala Gly Arg Phe Gln Lys Pro Val Val Ile Leu Lys Gly Glu Asp
 180 185 190

Glu Phe Tyr Lys Glu Asn Ser Tyr Asn Leu Ser Ser Ala Leu His Val

195	200	205
Gly Leu Leu Met Leu Ala Asp Arg Phe Thr Glu Phe Asp Leu Tyr Lys 210 215 220		
Thr Ile Val Ser Leu Ser Tyr Leu Gly Asp Ile Arg Met Ser Phe Phe 225 230 235 240		
Ala Glu Asn Pro Arg Lys Val Glu Asn Ile Val Ser Lys Gln Ile Ala 245 250 255		
Phe Phe Arg Lys Leu Tyr Leu Pro Leu Leu Tyr Ala Glu Pro Gly Val 260 265 270		
His Phe Ile Glu Ser Ser Glu Val Leu Lys Ser Met Asp Pro Ser Asp 275 280 285		
Asn Ser Arg Tyr Leu Ser Phe His Gln Asn Ile Thr Lys Asp Ser Ile 290 295 300		
Ser Arg Leu Leu Asn Gly Leu Pro Leu Asn Leu Val Lys Ile Leu Gly 305 310 315 320		
Leu Lys Pro Asp Thr Ser Ser Phe Glu Lys Cys Ala Glu Leu Met Leu 325 330 335		
Thr Asn Gln Ile Ser Thr Arg Ser Leu Leu Ile Ser Lys Ser Ile Lys 340 345 350		
Lys Leu Thr Ser Phe Ser Ile Leu Thr Gln Ser Ile Lys Gly Ile Phe 355 360 365		
Thr Ala Arg Cys His Ser Phe Arg Trp Tyr Met Ser Met Arg Ser 370 375 380		

<210> 23
 <211> 274
 <212> PRT
 <213> Caenorhabditis elegans

<400> 23
 Met Asp Glu Tyr Arg Glu Leu Ile Ser Val Leu Pro Leu Glu Thr Val
 1 5 10 15
 Glu Tyr Ala Phe Ala Tyr Gly Ser Gly Ala Ile Gln Gln Gln Asn Glu
 20 25 30
 Asp Lys Ser Glu Lys Met Val Asp Phe Val Ile Val Thr Lys Asn Ala
 35 40 45
 Gln Glu Phe His Arg Asp Asn Ile Leu Lys Asn Pro Gln His Tyr Ser
 50 55 60
 Leu Leu Arg Leu Met Gly Pro Lys Met Ile Glu Lys Ile Gln Cys Asn
 65 70 75 80

Phe Ala Ala Arg Val Tyr Tyr Asn Thr His Val Lys Val Gly Lys Arg
 85 90 95
 Lys Ile Lys Tyr Gly Val Ile Ser Tyr Glu Asn Val Lys Gln Asp Leu
 100 105 110
 Leu Asp Trp Arg Trp Ile Tyr Ile Ser Gly Arg Leu His Lys Pro Val
 115 120 125
 Leu Glu Val Ile Lys Pro Arg Gln Asp Met Cys Asp Leu Val Thr Glu
 130 135 140
 Asn Arg Arg Ser Ala Leu His Ser Ser Leu Leu Leu Leu Pro Glu Ser
 145 150 155 160
 Phe Thr Leu Lys Gln Leu Phe His Lys Ile Val Gly Leu Ser Tyr Thr
 165 170 175
 Gly Asp Phe Arg Met Val Val Gly Glu Asp Lys Asn Lys Ile Asn Lys
 180 185 190
 Ile Val Glu Gly Asn Tyr Glu Glu Leu Leu Arg Val Tyr Glu Pro Leu
 195 200 205
 Met Asn Asp Asp Ala Arg Leu Ser Val Ile Phe Ser Leu Ala His Arg
 210 215 220
 His Asp Val Ala Ala Thr Val Glu Thr Ala Ile Gly Gly Ile Ile Arg
 225 230 235 240
 Pro Val Ser Leu Ser Gln Thr Ala Lys Asn Ala Phe Ser Ala Gly Val
 245 250 255
 Thr Arg Ser Ile Ile Tyr Ser Met Ala Lys Met Ser Lys Phe Leu Lys
 260 265 270

Ser Lys

<210> 24
 <211> 647
 <212> PRT
 <213> *Drosophila melanogaster*

<400> 24
 Met Leu Asp Leu Tyr Arg Arg Thr Val Ala Arg Phe Pro Leu Gly Ser
 1 5 10 15
 Val Ser Tyr Met Phe Ala Tyr Gly Ser Gly Val Lys Gln Gln Glu Gly
 20 25 30
 Tyr Gly Lys Val Gly Asn Gly Asn Asn Leu Arg Pro Pro Pro Gly Thr
 35 40 45
 Val Val Asp Leu Val Phe Cys Val Arg Asp Ala Arg Gly Phe His Ala
 50 55 60

Glu	Asn	Leu	His	Arg	His	Pro	Asp	His	Tyr	Ser	Ala	Leu	Arg	His	Leu	65	70	75	80
Gly	Pro	Asn	Phe	Val	Ala	Lys	Tyr	Gln	Glu	Arg	Leu	Gly	Ala	Gly	Val	85	90	95	
Tyr	Cys	Asn	Thr	Leu	Val	Pro	Leu	Pro	Asp	Val	Gly	Ile	Thr	Ile	Lys	100	105	110	
Tyr	Gly	Val	Val	Ser	Gln	Glu	Glu	Leu	Leu	Glu	Asp	Leu	Leu	Asp	Trp	115	120	125	
Arg	His	Leu	Tyr	Leu	Ala	Gly	Arg	Leu	His	Lys	Pro	Val	Thr	Asn	Leu	130	135	140	
Val	Asn	Pro	Ser	Asp	Asn	Pro	Pro	Leu	Lys	Ala	Ala	Leu	Glu	Arg	Asn	145	150	155	160
Leu	Val	Ser	Ala	Leu	Gln	Val	Ala	Leu	Leu	Leu	Pro	Glu	Lys	Phe	165	170	175		
Thr	Ala	Tyr	Gly	Leu	Phe	His	Thr	Ile	Ala	Gly	Leu	Ser	Tyr	Lys	Gly	180	185	190	
Asp	Phe	Arg	Met	Ile	Phe	Gly	Glu	Asn	Lys	Gln	Lys	Val	His	Asn	Ile	195	200	205	
Val	Ser	Pro	Gln	Ile	Asn	Asp	Phe	Phe	Ala	Leu	Tyr	Gln	Pro	Ser	Leu	210	215	220	
Gly	Gln	Leu	Ser	Asp	Tyr	Val	Ala	Val	Asn	Met	Lys	Gly	Gln	Glu	Pro	225	230	235	240
Gly	Ser	Arg	Lys	Pro	Ala	Ile	Ile	Phe	Glu	Gln	Asp	Lys	Ser	Ser	Ser	245	250	255	
Ala	Thr	Cys	Gln	His	Leu	Arg	Gln	Leu	Pro	Arg	Glu	Leu	Gln	Lys	Arg	260	265	270	
Leu	Gln	Arg	Asn	Ala	Ala	Cys	Arg	Gly	Asp	Tyr	Thr	Gln	Val	Val	Asn	275	280	285	
His	Leu	Ser	Met	Ala	Ser	Gln	Leu	Pro	Glu	Val	Leu	Gln	Ala	Ser	Val	290	295	300	
Asn	Asp	Ile	Ile	Met	Ser	Ser	Asp	Asp	Asn	Ser	Ser	Asp	Ser	Asn	Ser	305	310	315	320
Ser	Ser	Asp	Glu	Arg	Gln	Arg	Lys	Arg	Lys	Leu	Lys	Lys	His	Ser	Lys	325	330	335	
Asp	Val	Asp	Lys	Ser	Lys	Lys	Lys	Lys	Ser	Lys	Lys	His	Lys	Lys	Glu	340	345	350	
Lys	Arg	Arg	His	Lys	Glu	Lys	Lys	Arg	Ser	Lys	His	Glu	Glu	Glu	Pro	355	360	365	

Pro Val Pro Tyr Thr Gln Pro Pro His Leu Ile Asn Ala Ser Pro Pro
 370 375 380
 Asp Val Ala Thr Asn Asn Glu Asp Ser Phe Gly Pro Ala Leu Pro Pro
 385 390 395 400
 His Leu Arg Lys Thr Gln Gln Pro Glu Leu Pro Glu Gln Ser Gln Pro
 405 410 415
 Ala Pro Gln Pro Gln Ala Met Ile Gly Pro Val Leu Pro Ser Asn Leu
 420 425 430
 Thr Arg Glu Lys Ser Pro Thr Lys Glu Ala Glu Ala Glu Asp Asp Asp
 435 440 445
 Asp Leu Ala Gly Thr Phe Gly Pro Leu Pro Asn Ala Ser Gln Val Ala
 450 455 460
 Leu Glu Glu Arg Ala Leu Ala Leu Lys Leu Ala Ala Leu Glu Gly Gly
 465 470 475 480
 Gly Leu Gly Thr Ser Thr Asp Gln Asp Val Arg Glu Glu Trp Met Leu
 485 490 495
 Glu Leu Pro Asp Val Gly Leu Lys Ser Gly Leu Ala Ala Leu Ser Asn
 500 505 510
 Met Lys Arg Thr Phe Tyr Gln Gly Lys Glu Arg Pro Asp Phe Ser Asp
 515 520 525
 Arg Ser Ser Trp Thr Lys Thr Pro Gln Ser Glu Ala Asp Ala Ala Ala
 530 535 540
 Ser Gly Pro Lys Ser Leu Ser Ser Lys Glu Leu Glu Gln Met Ala Gln
 545 550 555 560
 Val Lys Tyr Glu Gln Gln Arg Asp Asp Glu Gln Glu Ser Met Ala Lys
 565 570 575
 Arg His Lys Lys Lys His Lys Arg Glu Glu Ser Leu Val Glu Leu His
 580 585 590
 Gln Lys Lys Leu Arg Lys Glu Gln Arg Glu Lys Pro Glu Arg Arg Pro
 595 600 605
 Phe Ser Arg Asp Val Asp Leu Lys Leu Asn Lys Ile Asp Lys Asn Gln
 610 615 620
 Thr Lys Gln Ile Val Asp Lys Ala Lys Ile Leu Asn Thr Lys Phe Ser
 625 630 635 640
 Arg Gly Gln Ala Lys Tyr Leu
 645

<210> 25

<213> Arabidopsis thaliana

Met Glu Thr Thr Gln Lys Asp Glu Leu Ser Ser Phe Leu Ser Val Leu
1 5 10 15

Pro Pro Val Asp Phe Cys Cys Val Tyr Gly Ser Thr Leu His Pro Asn
20 25 30

Asn Gln Asp Lys Ser Lys Met Val Asp Tyr Ile Leu Gly Val Ser Asp
35 40 45

Pro Ile Lys Trp His Ser Ala Asn Leu Lys Met Asn Ser Asp His Tyr
50 55 60

Ala Ser Trp Met Val His Leu Gly Gly Ala Arg Leu Ile Thr Asn Val
65 70 75 80

Ala Asp Lys Val Gly Val Gly Val His Phe Asn Pro Phe Val Asn Trp
85 90 95

Asn Asp Arg Lys Leu Lys Tyr Gly Val Val Arg Met His Asp Leu Val
100 105 110

Gln Asp Ile Leu Asp Trp Lys Arg Phe Tyr Leu Ser Gly Arg Leu Gln
115 120 125

Lys Pro Val His Met Leu Val Asp Asn Leu Asp Ile Glu Asp Val Asn
130 135 140

Ser Val Asn Lys Arg Ala Ala Ile Ser Ala Ala Leu Leu Leu Leu Pro
145 150 155 160

Ser Lys Phe Thr Glu Glu Asp Leu Tyr Ala Lys Ile Cys Ser Leu Ser
165 170 175

Tyr Met Gly Asp Leu Arg Met Phe Phe Ala Glu Asp Thr Asn Lys Val
180 185 190

Asn Lys Ile Val Lys Gly Gln Phe Asp Leu Phe Gln Ser Met Tyr Lys
195 200 205

Pro Phe Leu Glu Glu Cys Glu Thr Lys Asn Leu Leu Arg Phe Ser Ser
210 215 220

Ala Glu Ala Ser His Thr Lys Leu Val Gln Asp Ser Ser Leu Ser Ala
225 230 235 240

Thr Arg Ser Leu Val Ser Ser Leu Pro Ala Ser Val Arg Ser Gln Met
245 250 255

Gly Lys Ser Leu Gly Glu Lys Lys Phe Val Ser Glu Thr Gly Arg Val
260 265 270

Met Gly Glu Val Cys Ile Ser Ser Arg Glu Glu Ala Ala Lys Cys Met

275 280 285

Glu Lys Val Met Arg Arg Arg Val Met Val Ser Ser Gly Arg Gln Ala
 290 295 300

Val Ser Gly Phe Leu Ala Ala Gly Ala Ile Asn Ala Thr Met Tyr Leu
 305 310 315 320

Ser Gln Lys Met Arg Lys Ala Trp Asn Ser Arg Ala
 325 330

<210> 26
 <211> 983
 <212> DNA
 <213> Homo sapiens

<400> 26

ccgcggctgt gtcgtcatatc ttgcgcgcgcg acgcccgcgc tcgcttgtga aactggaagg 60
 ctgccatggc tagcccagcc gctcctcgg tgcgaccacc gagggccaag aaagagccgc 120
 agacgctcgt catccccaag aatgcggcgg aggagcagaa gctcaagctg gagcggtcga 180
 tgaagaaccc ggacaaagca gttccaattc cagagaaaaat gagtgaatgg gcacctcgac 240
 ctccccaga atttgtccga gatgtcatgg gttcaagtgc tggggccggc agtggagagt 300
 tccacgtgta cagacatctg cgccggagag aatatcagcg acaggactac atggatgccca 360
 tggctgagaa gcaaaaattg gatgcagagt ttcagaaaag actggaaaag aataaaaattg 420
 ctgcagagga gcagaccgca aagcgccgga agaagcgcca gaagttaaaa gagaagaaat 480
 tactggcaaa gaagatgaaa cttgaacaga agaaacaaga aggaccgggt cagcccaagg 540
 agcaggggtc cagcagctct gcggaggcat ctggaacaga ggaggaggag gaagtgccca 600
 gtttcacat ggggcgatga caatgtttgc cacagcctct gcctggaacc tggctcgtgc 660
 tgtgaccaga agggaaaggc ggctgtttgg ctctttctcc cccgcaagga cccgctgacc 720
 cgctggatgg agagcaaagg agaccctcc cgagccgctc acagtctgt atttggcagg 780
 tttgggagcc tgaggggcca tctccctgac actcagaggc actgccttgc agacaccatc 840
 cgtgctcctg gtaaaagggg acagagagcc tcaccttgcc acatatttga acagtgatga 900
 gtttggggct ggtttctggg aagggaacgt ttatttagta aagagcagaa cacccttaa 960
 aaaaaaaaaa aaaaaaaaaa aaa 983

<210> 27
 <211> 184
 <212> PRT
 <213> Homo sapiens

<400> 27

Met Ala Ser Pro Ala Ala Ser Ser Val Arg Pro Pro Arg Pro Lys Lys
 1 5 10 15

Glu Pro Gln Thr Leu Val Ile Pro Lys Asn Ala Ala Glu Glu Gln Lys
 20 25 30

Leu Lys Leu Glu Arg Leu Met Lys Asn Pro Asp Lys Ala Val Pro Ile
 35 40 45

Pro Glu Lys Met Ser Glu Trp Ala Pro Arg Pro Pro Pro Glu Phe Val
 50 55 60

Arg Asp Val Met Gly Ser Ser Ala Gly Ala Gly Ser Gly Glu Phe His
 65 70 75 80

Val Tyr Arg His Leu Arg Arg Arg Glu Tyr Gln Arg Gln Asp Tyr Met
85 90 95

Asp Ala Met Ala Glu Lys Gln Lys Leu Asp Ala Glu Phe Gln Lys Arg
100 105 110

Leu Glu Lys Asn Lys Ile Ala Ala Glu Glu Gln Thr Ala Lys Arg Arg
115 120 125

Lys Lys Arg Gln Lys Leu Lys Glu Lys Lys Leu Leu Ala Lys Lys Met
130 135 140

Lys Leu Glu Gln Lys Lys Gln Glu Gly Pro Gly Gln Pro Lys Glu Gln
145 150 155 160

Gly Ser Ser Ser Ser Ala Glu Ala Ser Gly Thr Glu Glu Glu Glu Glu
165 170 175

Val Pro Ser Phe Thr Met Gly Arg
180

<210> 28
<211> 983
<212> DNA
<213> Homo sapiens

<400> 28
tttttttttt tttttttttt ttttttaagg gtgttctgct ctttactaaa taaacgttcc 60
cttcccagaa accagcccca aactcatcac tgttcaaata tgtggcaagg tgaggctctc 120
tgtccccctt taccaggagc acggatggtg tctgcaaggc agtgccctctg agtgtcaggg 180
agatggcccc tcaggctccc aaacctgcca aatacaggac tgtgagcggc tcgggagggg 240
tctcctttgc tctccatcca gcgggtcagc gggctccttg gggggagaaa gagccaaaca 300
gccgcctttc ctttctgggtc acagcacgag ccaggttcca ggcagaggct gtggcaaaca 360
ttgtcatcgc cccatggtga aactgggcac ttcctcctcc tctctgttc cagatgcctc 420
cgcagagctg ctggaccctt gctccttggg ctgaccgggt ccttcttgtt tcttctgttc 480
aagtttcac tcttttgcca gtaatttctt ctcttttaac ttctggcgct tcttcggcg 540
ctttgcggtc tgctcctctg cagcaatttt attcttttcc agtcttttct gaaactctgc 600
atocaaattt tgcttctcag ccatggcatc catgtagtcc tgtcgctgat attctctccg 660
gcgcagatgt ctgtacacgt ggaactctcc actgccggcc ccagcacttg aacctatgac 720
atctcggaca aattctgggg gaggtcgagg tgccatttca ctcatcttct ctggaattgg 780
aactgctttg tccgggttct tcatgagccg ctccagcttg agcttctgct cctccgccgc 840
attcttgggg atgacgagcg tctgcggctc tttcttgggc ctcggtgggc gcaccgagga 900
ggcggctggg ctagccatgg cagccttcca gtttcacaag cgagcggcgg cgtcggcgcg 960
caagtatgac gacacagccg cgg 983

<210> 29
<211> 184
<212> PRT
<213> Homo sapiens

<400> 29
Met Ala Ser Pro Ala Ala Ser Ser Val Arg Pro Pro Arg Pro Lys Lys
1 5 10 15

Glu Pro Gln Thr Leu Val Ile Pro Lys Asn Ala Ala Glu Glu Gln Lys
 20 25 30
 Leu Lys Leu Glu Arg Leu Met Lys Asn Pro Asp Lys Ala Val Pro Ile
 35 40 45
 Pro Glu Lys Met Ser Glu Trp Ala Pro Arg Pro Pro Pro Glu Phe Val
 50 55 60
 Arg Asp Val Met Gly Ser Ser Ala Gly Ala Gly Ser Gly Glu Phe His
 65 70 75 80
 Val Tyr Arg His Leu Arg Arg Arg Glu Tyr Gln Arg Gln Asp Tyr Met
 85 90 95
 Asp Ala Met Ala Glu Lys Gln Lys Leu Asp Ala Glu Phe Gln Lys Arg
 100 105 110
 Leu Glu Lys Asn Lys Ile Ala Ala Glu Glu Gln Thr Ala Lys Arg Arg
 115 120 125
 Lys Lys Arg Gln Lys Leu Lys Glu Lys Lys Leu Leu Ala Lys Lys Met
 130 135 140
 Lys Leu Glu Gln Lys Lys Gln Glu Gly Pro Gly Gln Pro Lys Glu Gln
 145 150 155 160
 Gly Ser Ser Ser Ser Ala Glu Ala Ser Gly Thr Glu Glu Glu Glu Glu
 165 170 175
 Val Pro Ser Phe Thr Met Gly Arg
 180

<210> 30
 <211> 186
 <212> PRT
 <213> Mus musculus

<400> 30
 Met Ala Ser Pro Ala Ala Ala Ser Val Arg Pro Pro Arg Pro Lys Lys
 1 5 10 15
 Glu Pro Gln Thr Leu Val Ile Pro Lys Asn Ala Ala Glu Glu Gln Lys
 20 25 30
 Leu Lys Leu Glu Arg Leu Met Lys Asn Pro Asp Lys Ala Val Pro Ile
 35 40 45
 Pro Glu Lys Met Asn Glu Trp Ala Pro Arg Ala Pro Pro Glu Phe Val
 50 55 60
 Arg Asp Val Met Gly Ser Ser Ala Gly Ala Gly Ser Gly Glu Phe His
 65 70 75 80
 Val Tyr Arg His Leu Arg Arg Arg Glu Tyr Gln Arg Gln Asp Tyr Met
 85 90 95

Asp Ala Met Ala Glu Lys Gln Lys Leu Asp Ala Glu Phe Gln Lys Arg
 100 105 110

Leu Glu Lys Asn Lys Ile Ala Ala Glu Glu Gln Thr Ala Lys Arg Arg
 115 120 125

Lys Lys Arg Gln Lys Leu Lys Glu Lys Lys Leu Leu Ala Lys Lys Met
 130 135 140

Lys Leu Glu Gln Lys Lys Gln Lys Glu Glu Pro Ser Gln Cys Gln Glu
 145 150 155 160

Gln His Ala Ser Ser Ser Asp Glu Ala Ser Glu Thr Glu Glu Glu Glu
 165 170 175

Glu Glu Pro Ser Val Leu Ile Met Gly Arg
 180 185

<210> 31

<211> 186

<212> PRT

<213> Mus musculus

<400> 31

Met Ala Ser Pro Ala Ala Ala Ser Val Arg Pro Pro Arg Pro Lys Lys
 1 5 10 15

Glu Pro Gln Thr Leu Val Ile Pro Lys Asn Ala Ala Glu Glu Gln Lys
 20 25 30

Leu Lys Leu Glu Arg Leu Met Lys Asn Pro Asp Lys Ala Val Pro Ile
 35 40 45

Pro Glu Lys Met Asn Glu Trp Ala Pro Arg Ala Pro Pro Glu Phe Val
 50 55 60

Arg Asp Val Met Gly Ser Ser Ala Gly Ala Gly Ser Gly Glu Phe His
 65 70 75 80

Val Tyr Arg His Leu Arg Arg Arg Glu Tyr Gln Arg Gln Asp Tyr Met
 85 90 95

Asp Ala Met Ala Glu Lys Gln Lys Leu Asp Ala Glu Phe Gln Lys Arg
 100 105 110

Leu Glu Lys Asn Lys Ile Ala Ala Glu Glu Gln Thr Ala Lys Arg Arg
 115 120 125

Lys Lys Arg Gln Lys Leu Lys Glu Lys Lys Leu Leu Ala Lys Lys Met
 130 135 140

Lys Leu Glu Gln Lys Lys Gln Lys Glu Glu Pro Ser Gln Cys Gln Glu
 145 150 155 160

Gln His Ala Ser Ser Ser Asp Glu Ala Ser Glu Thr Glu Glu Glu Glu

165	170	175
Glu Glu Pro Ser Val Val Ile Met Gly Arg		
180	185	
<210> 32		
<211> 148		
<212> PRT		
<213> Mus musculus		
<400> 32		
Met Lys Asn Pro Asp Lys Ala Val Pro Ile Pro Glu Lys Met Asn Glu		
1	5	10 15
Trp Ala Pro Arg Ala Pro Pro Glu Phe Val Arg Asp Val Met Gly Ser		
20	25	30
Ser Ala Gly Ala Gly Ser Gly Glu Phe His Val Tyr Arg His Leu Arg		
35	40	45
Arg Arg Glu Tyr Gln Arg Gln Asp Tyr Met Asp Ala Met Ala Glu Lys		
50	55	60
Gln Lys Leu Asp Ala Glu Phe Gln Lys Arg Leu Glu Lys Asn Lys Ile		
65	70	75 80
Ala Ala Glu Glu Gln Thr Ala Lys Arg Arg Lys Lys Arg Gln Lys Leu		
85	90	95
Lys Glu Lys Lys Leu Leu Ala Lys Lys Met Lys Leu Glu Gln Lys Lys		
100	105	110
Gln Lys Glu Glu Pro Ser Gln Cys Gln Glu Gln His Ala Ser Ser Ser		
115	120	125
Asp Glu Ala Ser Glu Thr Glu Glu Glu Glu Glu Pro Ser Val Val		
130	135	140
Ile Met Gly Arg		
145		

<210> 33
 <211> 253
 <212> PRT
 <213> Drosophila melanogaster

<400> 33		
Met Ser Leu Ile Lys Asn Leu Val Lys Glu Pro Glu Gln Lys Ala Lys		
1	5	10 15
Lys Lys Lys Lys Asn Ala Gly Ser Gly Glu Ser Asp Ser Asp Glu Lys		
20	25	30
Asp Lys Pro Leu Arg Pro Phe Ile Lys Thr Ala Thr Asp Leu Gln Arg		
35	40	45

Leu Lys Leu Glu Lys Leu Met Lys Asn Pro Asp Lys Pro Val Val Ile
 50 55 60
 Pro Glu Gln Arg Arg Glu Arg Asp Phe Met Ser Ser Val Pro Thr Phe
 65 70 75 80
 Val Arg Asn Val Met Gly Ser Ser Ala Gly Ala Gly Ser Gly Glu Phe
 85 90 95
 His Val Tyr Arg His Leu Arg Arg Lys Glu Tyr Ala Arg Gln Lys Asn
 100 105 110
 Ile Gln Asn Gln Ser Ala Arg Glu Ala Ala Asp Glu Ala Tyr Gln Gln
 115 120 125
 Lys Leu Asp Asp Asn Arg Arg Ala Ala Glu Glu Lys Thr Ala Lys Lys
 130 135 140
 Arg Ala Lys Arg Leu Lys Arg Lys Gln Arg Ala Lys Lys Pro Arg Glu
 145 150 155 160
 Asp Lys Lys Pro Leu Ala Lys Glu Ala Ser Glu Asp Ser Asn Thr Asp
 165 170 175
 Ser Glu Glu Glu Pro Thr Glu Glu Lys Ala Glu Ser Ser Pro Glu Glu
 180 185 190
 Gly Gln Gln Val Ala Ser Lys Glu Ser Asp Asp Asn Asn Thr Gln Glu
 195 200 205
 Thr Ser Asn Glu Glu Ala Val Asn Ser Asn Thr Glu Ala Lys Ser Ala
 210 215 220
 Glu Asp Thr Asn Ala Val Glu Leu Asp Ser Thr Glu Ala Thr Lys Glu
 225 230 235 240
 Ser Gln Asn Val Asp Gln Glu Gln Asp Lys Pro Val Pro
 245 250

<210> 34

<211> 2456

<212> DNA

<213> Homo sapiens

<400> 34

gaattcctga ctgccacagg tgtacaggaa acatttgtct tttgttgctg gaaagctgct 60
 caaatcaaag aacatttact gaagtcaaag tgggtccgcc ctacatctct caatgtgggt 120
 cgaataatta catcagagct ctatcgatca ctgggagatg tcttccgtga tgttgatgcc 180
 aaggctttgg tgcgctctga ctttcttctg gtgtatgggg atgtcatctc aaacatcaat 240
 atcaccagag cccttgagga acacaggttg agacggaagc tagaaaaaaa tgtttctgtg 300
 atgacgatga tcttcaagga gtcattcccc agccacccaa ctcgttgcca cgaagacaat 360
 gtggtagtgg ctgtggatag taccacaaac agggttctcc attttcagaa gaccaggggt 420
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 cgatatgatt tactggattg tcatatcagc atctgttctc ctcaggtggc acaactcttt 540
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ctcaccccag aggcgaaact cactgacagc accaccaga gctgcactca tccccggcac 780
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aagtatgtga ccagaatcac atgatagcct ttccttaaca cctgggggag agggaggacg 2400
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<210> 35
 <211> 366
 <212> PRT
 <213> Homo sapiens

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 35 40 45
 Ala Gly Ala Gln Ile His Gln Ser Leu Leu Cys Asp Asn Ala Glu Val
 50 55 60
 Lys Glu Arg Val Thr Leu Lys Pro Arg Ser Val Leu Thr Ser Gln Val
 65 70 75 80
 Val Val Gly Pro Asn Ile Thr Leu Pro Glu Gly Ser Val Ile Ser Leu
 85 90 95

His Pro Pro Asp Ala Glu Glu Asp Glu Asp Asp Gly Glu Phe Ser Asp
 100 105 110
 Asp Ser Gly Ala Asp Gln Glu Lys Asp Lys Val Lys Met Lys Gly Tyr
 115 120 125
 Asn Pro Ala Glu Val Gly Ala Ala Gly Lys Gly Tyr Leu Trp Lys Ala
 130 135 140
 Ala Gly Met Asn Met Glu Glu Glu Glu Leu Gln Gln Asn Leu Trp
 145 150 155 160
 Gly Leu Lys Ile Asn Met Glu Glu Glu Ser Glu Ser Glu Ser Glu Gln
 165 170 175
 Ser Met Asp Ser Glu Glu Pro Asp Ser Arg Gly Gly Ser Pro Gln Met
 180 185 190
 Asp Asp Ile Lys Val Phe Gln Asn Glu Val Leu Gly Thr Leu Gln Arg
 195 200 205
 Gly Lys Glu Glu Asn Ile Ser Cys Asp Asn Leu Val Leu Glu Ile Asn
 210 215 220
 Ser Leu Lys Tyr Ala Tyr Asn Ile Ser Leu Lys Glu Val Met Gln Val
 225 230 235 240
 Leu Ser His Val Val Leu Glu Phe Pro Leu Gln Gln Met Asp Ser Pro
 245 250 255
 Leu Asp Ser Ser Arg Tyr Cys Ala Leu Leu Leu Pro Leu Leu Lys Ala
 260 265 270
 Trp Ser Pro Val Phe Arg Asn Tyr Ile Lys Arg Ala Ala Asp His Leu
 275 280 285
 Glu Ala Leu Ala Ala Ile Glu Asp Phe Phe Leu Glu His Glu Ala Leu
 290 295 300
 Gly Ile Ser Met Ala Lys Val Leu Met Ala Phe Tyr Gln Leu Glu Ile
 305 310 315 320
 Leu Ala Glu Glu Thr Ile Leu Ser Trp Phe Ser Gln Arg Asp Thr Thr
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 Asp Lys Gly Gln Gln Leu Arg Lys Asn Gln Gln Leu Gln Arg Phe Ile
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 Gln Trp Leu Lys Glu Ala Glu Glu Glu Ser Ser Glu Asp Asp
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<210> 36
 <211> 2456
 <212> DNA
 <213> Homo sapiens

<400> 36

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<210> 37

<211> 641

<212> PRT

<213> Homo sapiens

<400> 37

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                20                      25                     30

Arg Pro Thr Ser Leu Asn Val Val Arg Ile Ile Thr Ser Glu Leu Tyr

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Arg Ser Asp Phe Leu Leu Val Tyr Gly Asp Val Ile Ser Asn Ile Asn		
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Ile Thr Arg Ala Leu Glu Glu His Arg Leu Arg Arg Lys Leu Glu Lys		
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Asn Val Ser Val Met Thr Met Ile Phe Lys Glu Ser Ser Pro Ser His		
	100	105
Pro Thr Arg Cys His Glu Asp Asn Val Val Val Ala Val Asp Ser Thr		
	115	120
Thr Asn Arg Val Leu His Phe Gln Lys Thr Gln Gly Leu Arg Arg Phe		
	130	135
Ala Phe Pro Leu Ser Leu Phe Gln Gly Ser Ser Asp Gly Val Glu Val		
	145	150
Arg Tyr Asp Leu Leu Asp Cys His Ile Ser Ile Cys Ser Pro Gln Val		
	155	160
Ala Gln Leu Phe Thr Asp Asn Phe Asp Tyr Gln Thr Arg Asp Asp Phe		
	165	170
Val Arg Gly Leu Leu Val Asn Glu Glu Ile Leu Gly Asn Gln Ile His		
	175	180
Met His Val Thr Ala Lys Glu Tyr Gly Ala Arg Val Ser Asn Leu His		
	185	190
Met Tyr Ser Ala Val Cys Ala Asp Val Ile Arg Arg Trp Val Tyr Pro		
	195	200
Leu Thr Pro Glu Ala Asn Phe Thr Asp Ser Thr Thr Gln Ser Cys Thr		
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His Ser Arg His Asn Ile Tyr Arg Gly Pro Glu Val Ser Leu Gly His		
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Gly Ser Ile Leu Glu Glu Asn Val Leu Leu Gly Ser Gly Thr Val Ile		
	225	230
Gly Ser Asn Cys Phe Ile Thr Asn Ser Val Ile Gly Pro Gly Cys His		
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Ile Gly Asp Asn Val Val Leu Asp Gln Thr Tyr Leu Trp Gln Gly Val		
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Arg Val Ala Ala Gly Ala Gln Ile His Gln Ser Leu Leu Cys Asp Asn		
	255	260
Ala Glu Val Lys Glu Arg Val Thr Leu Lys Pro Arg Ser Val Leu Thr		
	265	270
	275	280
	285	290
	295	300
	305	310
	315	320
	325	330
	335	

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Ile Ser Leu His Pro Pro Asp Ala Glu Glu Asp Glu Asp Asp Gly Glu		
370	375	380
Phe Ser Asp Asp Ser Gly Ala Asp Gln Glu Lys Asp Lys Val Lys Met		
385	390	400
Lys Gly Tyr Asn Pro Ala Glu Val Gly Ala Ala Gly Lys Gly Tyr Leu		
405	410	415
Trp Lys Ala Ala Gly Met Asn Met Glu Glu Glu Glu Glu Leu Gln Gln		
420	425	430
Asn Leu Trp Gly Leu Lys Ile Asn Met Glu Glu Glu Ser Glu Ser Glu		
435	440	445
Ser Glu Gln Ser Met Asp Ser Glu Glu Pro Asp Ser Arg Gly Gly Ser		
450	455	460
Pro Gln Met Asp Asp Ile Lys Val Phe Gln Asn Glu Val Leu Gly Thr		
465	470	475
Leu Gln Arg Gly Lys Glu Glu Asn Ile Ser Cys Asp Asn Leu Val Leu		
485	490	495
Glu Ile Asn Ser Leu Lys Tyr Ala Tyr Asn Val Ser Leu Lys Glu Val		
500	505	510
Met Gln Val Leu Ser His Val Val Leu Glu Phe Pro Leu Gln Gln Met		
515	520	525
Asp Ser Pro Leu Asp Ser Ser Arg Tyr Cys Ala Leu Leu Leu Pro Leu		
530	535	540
Leu Lys Ala Trp Ser Pro Val Phe Arg Asn Tyr Ile Lys Arg Ala Ala		
545	550	555
Asp His Leu Glu Ala Leu Ala Ala Ile Glu Asp Phe Phe Leu Glu His		
565	570	575
Glu Ala Leu Gly Ile Ser Met Ala Lys Val Leu Met Ala Phe Tyr Gln		
580	585	590
Leu Glu Ile Leu Ala Glu Glu Thr Ile Leu Ser Trp Phe Ser Gln Arg		
595	600	605
Asp Thr Thr Asp Lys Gly Gln Gln Leu Arg Lys Asn Gln Gln Leu Gln		
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Arg Phe Ile Gln Trp Leu Lys Glu Ala Glu Glu Glu Ser Ser Glu Asp		
625	630	635
640		
Asp		

<210> 38
 <211> 721
 <212> PRT
 <213> Oryctolagus cuniculus

<400> 38
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 Arg Gly Ala Glu Glu Glu Ser Pro Pro Pro Leu Gln Ala Val Leu Val
 35 40 45
 Ala Asp Ser Phe Asn Arg Arg Phe Phe Pro Ile Ser Lys Asp Gln Pro
 50 55 60
 Arg Val Leu Leu Pro Leu Ala Asn Val Ala Leu Ile Asp Tyr Thr Leu
 65 70 75 80
 Glu Phe Leu Thr Ala Thr Gly Val Gln Glu Thr Phe Val Phe Cys Cys
 85 90 95
 Trp Lys Ala Ala Gln Ile Lys Glu His Leu Gln Lys Ser Lys Trp Cys
 100 105 110
 Arg Pro Thr Ser Leu Asn Val Val Arg Ile Ile Thr Ser Glu Leu Tyr
 115 120 125
 Arg Ser Leu Gly Asp Val Leu Arg Asp Val Asp Ala Lys Ala Leu Val
 130 135 140
 Arg Ser Asp Phe Leu Leu Val Tyr Gly Asp Val Val Ser Asn Ile Asn
 145 150 155 160
 Val Thr Arg Ala Leu Glu Glu His Arg Leu Arg Arg Lys Leu Glu Lys
 165 170 175
 Asn Val Ser Val Met Thr Met Ile Phe Lys Glu Ser Ser Pro Ser His
 180 185 190
 Pro Thr Arg Cys His Glu Asp Asn Val Val Val Ala Val Asp Ser Ala
 195 200 205
 Thr Asn Arg Ile Leu His Phe Gln Lys Thr Gln Gly Leu Arg Arg Phe
 210 215 220
 Ser Phe Pro Leu Ser Leu Phe Gln Gly Ser Gly Ala Gly Val Glu Ile
 225 230 235 240
 Arg Tyr Asp Leu Leu Asp Cys His Ile Ser Ile Cys Ser Pro Gln Val
 245 250 255

Ala Gln Leu Phe Thr Asp Asn Phe Asp Tyr Gln Thr Arg Asp Asp Phe
 260 265 270
 Val Arg Gly Leu Leu Val Asn Glu Glu Ile Leu Gly Asn Gln Ile His
 275 280 285
 Met His Val Thr Thr Arg Glu Tyr Gly Ala Arg Val Ser Asn Leu His
 290 295 300
 Met Tyr Ser Ala Val Cys Ala Asp Val Ile Arg Arg Trp Val Tyr Pro
 305 310 315 320
 Leu Thr Pro Glu Ala Asn Phe Thr Asp Ser Thr Ala Gln Ser Cys Thr
 325 330 335
 His Ser Arg His Asn Ile Tyr Arg Gly Pro Glu Val Ser Leu Gly His
 340 345 350
 Gly Ser Ile Leu Glu Glu Asn Val Leu Leu Gly Ser Gly Thr Val Ile
 355 360 365
 Gly Ser Asn Cys Ser Ile Thr Asn Ser Val Ile Gly Pro Gly Cys Cys
 370 375 380
 Ile Gly Asp Asn Val Val Leu Asp Arg Ala Tyr Leu Trp Lys Gly Val
 385 390 395 400
 Gln Val Ala Ser Gly Ala Gln Ile His Gln Ser Leu Leu Cys Asp His
 405 410 415
 Ala Glu Val Lys Glu Gln Val Thr Leu Lys Pro His Cys Val Leu Thr
 420 425 430
 Ser Gln Val Val Val Gly Pro Asn Ile Thr Leu Pro Glu Gly Ser Val
 435 440 445
 Ile Ser Leu His Pro Pro Asp Ala Glu Glu Asp Glu Asp Asp Gly Gln
 450 455 460
 Phe Ser Asp Asp Ser Gly Val Asn Gln Ala Lys Glu Lys Ala Lys Leu
 465 470 475 480
 Lys Gly Tyr Asn Pro Ala Glu Val Gly Val Ala Gly Lys Gly Tyr Leu
 485 490 495
 Trp Lys Ala Ala Asp Met Asn Thr Glu Lys Glu Glu Glu Leu Arg Gln
 500 505 510
 Ser Leu Trp Gly Leu Thr Ile Asn Glu Glu Glu Glu Ser Glu Thr Glu
 515 520 525
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 530 535 540
 Pro Gln Leu Asp Asp Ile Lys Val Phe Gln Asn Glu Val Leu Gly Thr
 545 550 555 560

Leu Gln Arg Gly Lys Glu Glu Ser Ile Ser Cys Asp Asn Leu Ile Leu
 565 570 575
 Glu Ile Asn Ser Leu Lys Tyr Ala Tyr Asn Ile Ser Leu Lys Glu Val
 580 585 590
 Met Gln Val Leu Ser His Val Val Leu Glu Phe Pro Leu Gln Gln Met
 595 600 605
 Asp Ser Pro Leu Glu Ala Asn Arg Tyr Cys Ala Leu Leu Leu Pro Leu
 610 615 620
 Leu Lys Ala Trp Ser Pro Val Phe Arg Asn Tyr Ile Lys Arg Ala Ala
 625 630 635 640
 Asp His Leu Glu Ala Leu Ala Ala Ile Glu Glu Phe Phe Leu Glu His
 645 650 655
 Glu Ala Leu Gly Thr Cys Ile Ala Lys Val Leu Met Gly Phe Tyr Gln
 660 665 670
 Leu Glu Ile Leu Ala Glu Glu Thr Ile Leu Ser Trp Phe Gly Gln Arg
 675 680 685
 Asp Val Thr Asp Lys Gly Arg Gln Leu Arg Lys Asn Gln Gln Leu Gln
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 Asp

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 <211> 716
 <212> PRT
 <213> Rattus norvegicus

<400> 39
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 35 40 45
 Arg Arg Phe Phe Pro Ile Ser Lys Asp Gln Pro Arg Val Leu Leu Pro
 50 55 60
 Leu Ala Asn Val Ala Leu Ile Asp Tyr Thr Leu Glu Phe Leu Thr Ala
 65 70 75 80
 Thr Gly Val Gln Glu Thr Phe Val Phe Cys Cys Trp Lys Ala Ala Gln
 85 90 95

Ile Lys Glu His Leu Gln Lys Ser Lys Trp Cys His Pro Thr Ser Leu
 100 105 110
 Asn Val Val Arg Ile Thr Thr Ser Asp Leu Tyr Arg Ser Leu Gly Asp
 115 120 125
 Val Leu Arg Asp Val Asp Ala Lys Ala Leu Val Arg Ser Asp Phe Leu
 130 135 140
 Leu Ile Tyr Gly Asp Val Val Ser Asn Ile Asn Ile Ser Lys Ala Leu
 145 150 155 160
 Glu Glu His Arg Leu Arg Arg Lys Leu Glu Lys Asn Val Ser Val Met
 165 170 175
 Thr Met Val Phe Lys Glu Ser Ser Pro Ser His Pro Thr Arg Cys His
 180 185 190
 Glu Asp Asn Val Val Leu Ala Val Asp Ser Thr Thr Asn Arg Ile Leu
 195 200 205
 His Phe Gln Lys Thr Gln Gly Leu Arg His Phe Ser Phe Pro Leu Gly
 210 215 220
 Leu Phe Gln Gly Ser Leu Asp Gly Val Glu Ile Arg Tyr Asp Leu Leu
 225 230 235 240
 Asp Cys His Ile Ser Ile Cys Ser Pro Gln Val Ala Gln Leu Phe Thr
 245 250 255
 Asp Asn Phe Asp Tyr Gln Thr Arg Asp Asp Phe Val Arg Gly Leu Leu
 260 265 270
 Val Asn Glu Glu Ile Leu Gly Asn Gln Ile His Leu His Val Thr Ser
 275 280 285
 Arg Glu Tyr Gly Ser Arg Val Ser Asn Leu His Met Tyr Ser Ala Val
 290 295 300
 Cys Thr Asp Val Ile Arg Arg Trp Val Tyr Pro Leu Thr Pro Glu Val
 305 310 315 320
 Asn Phe Thr Asp Ser Ser Thr Gln Ser Tyr Thr His Ser Arg His Asn
 325 330 335
 Ile Tyr Arg Gly Pro Glu Val Ser Leu Gly His Gly Ser Val Leu Glu
 340 345 350
 Glu Asn Val Leu Leu Gly Ala Gly Thr Val Val Gly Ser Asn Cys Ser
 355 360 365
 Ile Thr Asn Ser Val Ile Gly Pro Asn Cys His Ile Gly Asp Asn Val
 370 375 380
 Val Leu Asp Gln Ala Tyr Leu Trp Gln Gly Val Arg Val Ala Ala Gly
 385 390 395 400

Ala Gln Ile His Gln Ser Leu Leu Cys Asp Arg Ala Glu Val Lys Glu
 405 410 415
 Arg Val Ile Leu Lys Pro His Cys Val Leu Thr Ser Gln Val Val Val
 420 425 430
 Gly Pro Asp Ile Ile Leu Pro Glu Gly Ser Val Ile Ser Leu His Pro
 435 440 445
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 450 455 460
 Gly Ala Asp Gln Glu Lys Glu Lys Val Lys Leu Lys Gly Tyr Asn Pro
 465 470 475 480
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 485 490 495
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 Asp Pro Glu Glu Leu Asp Ser Arg Ala Gly Ser Pro Gln Leu Asp Asp
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 Glu Glu Asn Ile Ser Cys Asp Asn Leu Val Leu Glu Ile Asn Ser Leu
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 580 585 590
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 Pro Val Phe Arg Asn Tyr Ile Lys Arg Ala Ala Asp His Leu Glu Ala
 625 630 635 640
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 645 650 655
 Ser Leu Ala Lys Val Leu Met Ala Phe Tyr Gln Leu Glu Ile Leu Ala
 660 665 670
 Glu Glu Thr Ile Leu Ser Trp Phe Ser Gln Arg Asp Ile Thr Asp Lys
 675 680 685
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 <213> Arabidopsis thaliana

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 35 40 45
 Leu Leu Pro Ile Val Asn Val Pro Met Ile Asp Tyr Thr Leu Ala Trp
 50 55 60
 Leu Glu Ser Ala Gly Ile Glu Glu Val Phe Val Phe Cys Cys Ala His
 65 70 75 80
 Ser Met Gln Val Ile Glu Tyr Leu Glu Lys Ser Glu Trp Tyr Ser His
 85 90 95
 Pro Asn Leu Leu Val Arg Thr Ile Glu Ser His Lys Ser Ile Ser Ala
 100 105 110
 Gly Asp Ala Leu Arg Tyr Met Tyr Glu Gln Gln Thr Glu Thr Ser Gln
 115 120 125
 Ile Gln Gly Asp Phe Val Leu Val Ser Gly Asp Thr Val Ser Asn Met
 130 135 140
 Pro Leu Ala Asp Leu Ile Gln Glu His Arg Glu Arg Lys Lys Lys Asp
 145 150 155 160
 Glu Lys Ala Ile Met Thr Met Val Ile Lys Gln Ser Lys Ser Ser Pro
 165 170 175
 Leu Thr His Gln Ser Arg Leu Gly Thr Asp Gln Leu Phe Ile Ala Val
 180 185 190
 Asp Pro Leu Thr Lys Gln Leu Leu His Tyr Glu Glu Asp Lys Ile Asp
 195 200 205
 His Pro Ser Gly Ser Val Cys Leu Glu Lys Ser Leu Leu Asp Thr Asn
 210 215 220
 Pro Ser Val Leu Val Cys Asn Asp Met Gln Asp Cys Tyr Ile Asp Ile
 225 230 235 240
 Cys Ser Pro Glu Val Leu Ser Leu Phe Glu Asp Asn Phe Asp Tyr Gln

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His	Leu	Arg	Arg	His	Phe	Val	Lys	Gly	Val	Leu	Val	Asp	Asp	Ile	Met
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Gly	Tyr	Lys	Ile	Phe	Thr	His	Glu	Ile	His	Ser	Ser	Tyr	Ala	Gly	Arg
		275					280					285			
Ile	Asp	Asn	Phe	Arg	Ser	Tyr	Asp	Thr	Val	Ser	Lys	Asp	Ile	Ile	Gln
	290					295					300				
Arg	Trp	Thr	Tyr	Pro	Tyr	Val	Pro	Asp	Ile	Asn	Phe	Ser	Gly	Asn	Arg
305					310					315					320
Pro	Leu	Lys	Leu	Gly	Arg	Gln	Gly	Ile	Tyr	Lys	Ala	Ser	Asp	Val	Val
				325					330					335	
Gln	Ser	Arg	Ser	Ala	Asp	Val	Gly	Ala	Ser	Thr	Val	Ile	Gly	Tyr	Gly
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Thr	Lys	Ile	Gly	His	Gly	Asp	Lys	Ile	Met	Asn	Ser	Val	Ile	Gly	Asn
	355						360					365			
Gly	Cys	Ser	Ile	Gly	Ser	Asn	Val	Val	Ile	Glu	Gly	Ser	Tyr	Ile	Trp
	370					375					380				
Asn	Asn	Val	Thr	Ile	Glu	Asp	Gly	Cys	Glu	Ile	Arg	Asn	Ala	Ile	Val
385					390					395					400
Cys	Asp	Gly	Val	Lys	Ile	Arg	Ala	Gly	Ala	Val	Leu	Gln	Pro	Gly	Val
				405					410					415	
Val	Leu	Ser	Phe	Asn	Val	Val	Val	Gly	Arg	Asp	Phe	Val	Val	Pro	Ala
			420					425					430		
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		435					440					445			
Glu	Glu	Leu	Glu	Tyr	Ala	Asp	Ser	Ser	Ser	Gly	Thr	Ala	Asp	His	Leu
	450					455					460				
Ser	Gly	Leu	Asn	Leu	Gln	Met	Glu	Ser	Lys	Ala	Ser	Glu	Leu	Gly	Pro
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Asp	Gly	Ala	Gly	Tyr	Ile	Trp	Glu	Val	Cys	Glu	Gly	Ala	His	Asp	Glu
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Glu	Trp	Lys	His	Ser	Val	Ala	Pro	Ile	Pro	Lys	Asp	Lys	Leu	Ser	Glu
			500					505					510		
Ile	Thr	Gln	Ala	Ile	Asp	Asp	Asp	Asp	Thr	Asp	Asp	Glu	Ser	Val	Val
		515					520					525			
Pro	Thr	Ser	Gly	Glu	Leu	Lys	Ser	Asp	Ala	Asp	Ser	Ile	Asn	Thr	Asp
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Val	Asn	Asp	Pro	Asn	Asp	Asp	Tyr	Tyr	Tyr	Phe	Glu	Lys	Glu	Val	Glu

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 Gly Thr Val Leu Arg Ala Val Glu Glu Asn Ile Lys Val Asp Leu Val
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 Thr Met Glu Ile Asn Gly Leu Arg Leu Ser Phe Asn Met Glu Ser Ala
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 Asp Cys Ala Gly Ala Thr Phe Phe Ser Met Ile Lys Leu Ala Leu Asp
 595 600 605
 Thr Pro His Asn Ser Gly Ser Glu Leu Tyr Lys Asn Ala Ala Ser Ile
 610 615 620
 Ile Thr Lys Trp Lys Asp Leu Leu Gly Phe Tyr Ala Lys Lys Ile Asp
 625 630 635 640
 Glu Gln Ile Glu Val Ile Met Lys Phe Glu Glu Met Cys Gln Glu Ser
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 His Lys Glu Leu Gly Pro Leu Phe Thr Gln Ile Leu His Leu Leu Tyr
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 Asp Lys Asp Val Leu Gln Glu Asp Ala Ile Leu Arg Trp Glu Glu Glu
 675 680 685
 Lys Ala Gly Ala Asp Glu Ala Asp Lys Val Tyr Leu Lys Gln Cys Asp
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 <212> PRT
 <213> Arabidopsis thaliana

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 35 40 45
 Leu Leu Pro Leu Val Asn Ile Pro Met Ile Asp Tyr Thr Leu Ala Trp
 50 55 60
 Leu Glu Ser Ala Gly Ile Glu Glu Val Phe Val Phe Cys Ser Met Gln
 65 70 75 80

Val	Ile	Asp	Tyr	Leu	Asn	Asn	Ser	Asp	Trp	Tyr	Ser	His	Lys	Asp	Phe	85	90	95
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Ala	Leu	Arg	Tyr	Ile	Tyr	Glu	Gln	Gln	Ile	Glu	Thr	Ser	Gln	Ile	Gln	115	120	125
Gly	Asp	Phe	Val	Leu	Val	Asn	Gly	Cys	Ile	Val	Ser	Asn	Met	Pro	Leu	130	135	140
Thr	Gln	Leu	Ile	Gln	Glu	His	Arg	Asp	Arg	Lys	Lys	Lys	Asp	Glu	Lys	145	150	155
Ala	Ile	Met	Thr	Met	Val	Ile	Arg	Gln	Ser	Leu	Ile	Thr	Asp	His	Gln	165	170	175
Leu	Phe	Ile	Ala	Val	Asn	Pro	Leu	Thr	Lys	Gln	Leu	Leu	Tyr	Tyr	Asp	180	185	190
Glu	Asp	Asn	Ile	Cys	Phe	Asp	Lys	Ser	Leu	Leu	Asp	Arg	Asn	Pro	Ser	195	200	205
Val	Leu	Leu	Cys	Ser	Asp	Met	Gln	Asp	Cys	Tyr	Ile	Asp	Ile	Cys	Ser	210	215	220
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Arg	Cys	Asp	Phe	Val	Glu	Gly	Val	Leu	Ala	Asp	Asp	Ile	Ile	Gly	Tyr	245	250	255
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Lys	Leu	Glu	Arg	Gln	Gly	Ile	Tyr	Lys	Ala	Ser	Asp	Ala	Thr	Gln	Leu	305	310	315
Pro	Ser	Ala	His	Val	Gly	Ala	Ser	Tyr	Val	Ile	Gly	His	Ala	Thr	Asn	325	330	335
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Val	Thr	Val	Glu	Asp	Gly	Cys	Glu	Ile	Arg	Asn	Ala	Ile	Val	Cys	Asp	370	375	380

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 Asp Gly Ala Gly Tyr Ile Trp Arg Gln Ala Cys Glu Asp Glu Trp Lys
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 His Ser Val Pro Pro Ile Pro Lys Asp Lys Leu Ala Glu Ile Ile Lys
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 Gly Asp Ala Asn Thr Ser Ile Asn Asn Asp Leu Phe Asp Phe Glu Arg
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 Glu Val Asp Gly Thr Phe Leu Arg Ala Val Glu Glu Asn Ile Val Ala
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 Lys Ser Asp Glu Gln Ile Glu Val Ile Ser Arg Leu Glu Glu Met Cys
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 Glu Glu Ser Ala His Glu Leu Gly Thr Leu Phe Ala His Ile Leu Arg
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 625 630 635 640
 Arg Trp Ser Asp Glu Lys Ala Gly Ala Asp Glu Ser Asp Lys Val Tyr
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 Asp Glu Asp Gly
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 <212> DNA
 <213> Homo sapiens

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<210> 43
 <211> 76
 <212> PRT
 <213> Homo sapiens

<400> 43
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 Gln Thr Leu Leu Gln Gln Met Gln Asp Lys Phe Gln Thr Met Ser Asp
 20 25 30
 Gln Ile Ile Gly Arg Ile Asp Asp Met Ser Ser Arg Ile Asp Asp Leu
 35 40 45

Glu Lys Asn Ile Ala Asp Leu Met Thr Gln Ala Gly Val Glu Glu Leu
 50 55 60

Glu Ser Glu Asn Lys Ile Pro Ala Thr Gln Lys Ser
 65 70 75

<210> 44
 <211> 2004
 <212> DNA
 <213> Homo sapiens

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<210> 45
 <211> 76
 <212> PRT
 <213> Homo sapiens

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Gln Ile Ile Gly Arg Ile Asp Asp Met Ser Ser Arg Ile Asp Asp Leu	35	40	45
Glu Lys Asn Ile Ala Asp Leu Met Thr Gln Ala Gly Val Glu Glu Leu	50	55	60
Glu Ser Glu Asn Lys Ile Pro Ala Thr Gln Lys Ser	65	70	75

<210> 46
 <211> 76
 <212> PRT
 <213> Mus musculus

<400> 46
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Glu Thr Leu Leu Gln Gln Met Gln Asp Lys Phe Gln Ile Met Ser Asp
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Gln Ile Ile Gly Arg Ile Asp Asp Met Ser Ser Arg Ile Asp Asp Leu
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Asp Pro Glu Asn Lys Ile Pro Thr Ala Gln Lys Ser
65 70 75

<210> 47
 <211> 86
 <212> PRT
 <213> Drosophila melanogaster

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35 40 45
Ser Asp Gln Ile Ile Thr Arg Ile Asp Asp Met Gly Asn Arg Ile Asp
50 55 60
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65 70 75 80

Gly Gln Gly Pro Glu Lys
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<210> 48

<211> 80

<212> PRT

<213> *Caenorhabditis elegans*

<400> 48

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Ala Asp Gly Asn Met Asn Asp Leu Thr Ser Leu Ile Gln Gly Val Leu
20 25 30

Gln Gln Thr Gln Asp Arg Phe Gln His Met Ser Asp Gln Ile Ile Arg
35 40 45

Arg Ile Asp Asp Met Thr Thr Arg Ile Asp Asp Leu Glu Lys Asn Ile
50 55 60

Asn Asp Leu Leu Gln Ser Asn Gln Val Glu His Pro Pro Ser Ala Gln
65 70 75 80

<210> 49

<211> 99

<212> PRT

<213> *Oryza sativa*

<400> 49

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35 40 45

Glu Asn Ile Ile Ser Lys Ile Asp Glu Met Gly Ala Arg Ile Asp Glu
50 55 60

Leu Glu Gln Ser Ile Asn Asp Leu Lys Val Glu Met Gly Thr Glu Gly
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Ile Thr Pro Thr Lys Pro Lys Asp Glu Glu Ser Lys Pro Ala Gly Ser
85 90 95

Ser Ala Glu

<210> 50
 <211> 4204
 <212> DNA
 <213> Homo sapiens

<400> 50

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<210> 51
 <211> 90
 <212> PRT
 <213> Homo sapiens

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Met Lys Leu Ala Ile Asp Ile Asp Pro Val Ile Met Leu Leu Phe Phe
          35                      40                      45

Leu Leu Leu Leu Ser Val Cys Ile Ser Ser Ser Leu Gly Trp Met Ser
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<210> 52
 <211> 3111
 <212> DNA
 <213> Homo sapiens

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<210> 53

<211> 569

<212> PRT

<213> Homo sapiens

<400> 53

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Cys	Asp	Val	Leu	Leu	Ile	Ala	Gly	His	Leu	Arg	Ile	Pro	Ala	His	Arg	35	40	45	
Leu	Val	Leu	Ser	Ala	Val	Ser	Asp	Tyr	Phe	Ala	Ala	Met	Phe	Thr	Asn	50	55	60	
Asp	Val	Leu	Glu	Ala	Lys	Gln	Glu	Glu	Val	Arg	Met	Glu	Gly	Val	Asp	65	70	75	80
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Gln	Leu	His	Pro	Ser	Asn	Cys	Leu	Gly	Ile	Arg	Ser	Phe	Gly	Asp	Ala	130	135	140	
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His	Phe	Ile	Glu	Val	Ile	Lys	Asn	Gln	Glu	Phe	Leu	Leu	Leu	Pro	Ala	165	170	175	
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Pro	Leu	Leu	Pro	Pro	Gln	Leu	Leu	Ala	Asp	Leu	Glu	Thr	Ser	Ser	Met	225	230	235	240
Phe	Thr	Gly	Asp	Leu	Glu	Cys	Gln	Lys	Leu	Leu	Met	Glu	Ala	Met	Lys	245	250	255	
Tyr	His	Leu	Leu	Pro	Glu	Arg	Arg	Ser	Met	Met	Gln	Ser	Pro	Arg	Thr	260	265	270	
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Trp	Asn	Tyr	Val	Ala	Ser	Met	Ser	Thr	Pro	Arg	Ser	Thr	Val	Gly	Val
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Ser	Asn	His	Cys	Ser	Arg	Leu	Ser	Asp	Cys	Val	Glu	Arg	Tyr	Asp	Pro
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Lys	Gly	Asp	Ser	Trp	Ser	Thr	Val	Ala	Pro	Leu	Ser	Val	Pro	Arg	Asp
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Ala	Val	Ala	Val	Cys	Pro	Leu	Gly	Asp	Lys	Leu	Tyr	Val	Val	Gly	Gly
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Tyr	Asp	Gly	His	Thr	Tyr	Leu	Asn	Thr	Val	Glu	Ser	Tyr	Asp	Ala	Gln
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Arg	Asn	Glu	Trp	Lys	Glu	Glu	Val	Pro	Val	Asn	Ile	Gly	Arg	Ala	Gly
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<210> 54
 <211> 3111
 <212> DNA
 <213> Homo sapiens

<400> 54

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<211> 728

<212> PRT

<213> Homo sapiens

<400> 55

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Ser	His	Pro	Phe	Gln	Gly	Ser	Thr	Asn	Thr	Gly	Ser	Cys	Leu	Gln	Gln	
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Glu	Gly	Tyr	Glu	His	Arg	Gly	Thr	Pro	Val	Gln	Gly	Arg	Leu	Lys	Ser	
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His	Ser	Arg	Asp	Arg	Asn	Gly	Leu	Lys	Lys	Ser	Asn	Ser	Pro	Val	His	
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His	Asn	Ile	Leu	Ala	Pro	Val	Pro	Gly	Pro	Ala	Pro	Ala	His	Gln	Arg	
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Ala	Val	Gln	Asn	Leu	Gln	Gln	His	Asn	Leu	Ile	Val	His	Phe	Gln	Ala	
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Asn	Glu	Asp	Thr	Pro	Lys	Ser	Val	Pro	Glu	Lys	Asn	Leu	Phe	Lys	Glu	
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Ile	Glu	Asp	Ser	Thr	Ala	Arg	Leu	Asp	Thr	Gln	His	Ser	Glu	Asp	Met	
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Val	Leu	Ser	Ala	Val	Ser	Asp	Tyr	Phe	Ala	Ala	Met	Phe	Thr	Asn	Asp	
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Val	Leu	Glu	Ala	Lys	Gln	Glu	Glu	Val	Arg	Met	Glu	Gly	Val	Asp	Pro	
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Leu	Lys	Glu	Asp	Thr	Ile	Glu	Ser	Leu	Leu	Ala	Ala	Ala	Cys	Leu	Leu	
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Gln	Leu	Thr	Gln	Val	Ile	Asp	Val	Cys	Ser	Asn	Phe	Leu	Ile	Lys	Gln	
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 305 310 315 320
 Phe Ile Glu Val Ile Lys Asn Gln Glu Phe Leu Leu Leu Pro Ala Asn
 325 330 335
 Glu Ile Ser Lys Leu Leu Cys Ser Asp Asp Ile Asn Val Pro Asp Glu
 340 345 350
 Glu Thr Ile Phe His Ala Leu Met Gln Trp Val Gly His Asp Val Gln
 355 360 365
 Asn Arg Gln Gly Glu Leu Gly Met Leu Leu Ser Tyr Ile Arg Leu Pro
 370 375 380
 Leu Leu Pro Pro Gln Leu Leu Ala Asp Leu Glu Thr Ser Ser Met Phe
 385 390 395 400
 Thr Gly Asp Leu Glu Cys Gln Lys Leu Leu Met Glu Ala Met Lys Tyr
 405 410 415
 His Leu Leu Pro Glu Arg Arg Ser Met Met Gln Ser Pro Arg Thr Lys
 420 425 430
 Pro Arg Lys Ser Thr Val Gly Ala Leu Tyr Ala Val Gly Gly Met Asp
 435 440 445
 Ala Met Lys Gly Thr Thr Thr Ile Glu Lys Tyr Asp Leu Arg Thr Asn
 450 455 460
 Ser Trp Leu His Ile Gly Thr Met Asn Gly Arg Arg Leu Gln Phe Gly
 465 470 475 480
 Val Ala Val Ile Asp Asn Lys Leu Tyr Val Val Gly Gly Arg Asp Gly
 485 490 495
 Leu Lys Thr Leu Asn Thr Val Glu Cys Phe Asn Pro Val Gly Lys Ile
 500 505 510
 Trp Thr Val Met Pro Pro Met Ser Thr His Arg His Gly Leu Gly Val
 515 520 525
 Ala Thr Leu Glu Gly Pro Met Tyr Ala Val Gly Gly His Asp Gly Trp
 530 535 540
 Ser Tyr Leu Asn Thr Val Glu Arg Trp Asp Pro Glu Gly Arg Gln Trp
 545 550 555 560
 Asn Tyr Val Ala Ser Met Ser Thr Pro Arg Ser Thr Val Gly Val Val
 565 570 575
 Ala Leu Asn Asn Lys Leu Tyr Ala Ile Gly Gly Arg Asp Gly Ser Ser
 580 585 590

Cys Leu Lys Ser Met Glu Tyr Phe Asp Pro His Thr Asn Lys Trp Ser
 595 600 605
 Leu Cys Ala Pro Met Ser Lys Arg Arg Gly Gly Val Gly Val Ala Thr
 610 615 620
 Tyr Asn Gly Phe Leu Tyr Val Val Gly Gly His Asp Ala Pro Ala Ser
 625 630 635 640
 Asn His Cys Ser Arg Leu Ser Asp Cys Val Glu Arg Tyr Asp Pro Lys
 645 650 655
 Gly Asp Ser Trp Ser Thr Val Ala Pro Leu Ser Val Pro Arg Asp Ala
 660 665 670
 Val Ala Val Cys Pro Leu Gly Asp Lys Leu Tyr Val Val Gly Gly Tyr
 675 680 685
 Asp Gly His Thr Tyr Leu Asn Thr Val Glu Ser Tyr Asp Ala Gln Arg
 690 695 700
 Asn Glu Trp Lys Glu Glu Val Pro Val Asn Ile Gly Arg Ala Gly Ala
 705 710 715 720
 Cys Val Val Val Val Lys Leu Pro
 725

<210> 56
 <211> 569
 <212> PRT
 <213> Homo sapiens

<400> 56
 Met Asn Ala Thr Arg Ser Glu Glu Gln Phe His Val Ile Asn His Ala
 1 5 10 15
 Glu Gln Thr Leu Arg Lys Met Glu Asn Tyr Leu Lys Glu Lys Gln Leu
 20 25 30
 Cys Asp Val Leu Leu Ile Ala Gly His Leu Arg Ile Pro Ala His Arg
 35 40 45
 Leu Val Leu Ser Ala Val Ser Asp Tyr Phe Ala Ala Met Phe Thr Asn
 50 55 60
 Asp Val Leu Glu Ala Lys Gln Glu Glu Val Arg Met Glu Gly Val Asp
 65 70 75 80
 Pro Asn Ala Leu Asn Ser Leu Val Gln Tyr Ala Tyr Thr Gly Val Leu
 85 90 95
 Gln Leu Lys Glu Asp Thr Ile Glu Ser Leu Leu Ala Ala Ala Cys Leu
 100 105 110
 Leu Gln Leu Thr Gln Val Ile Asp Val Cys Ser Asn Phe Leu Ile Lys

115					120					125					
Gln	Leu	His	Pro	Ser	Asn	Cys	Leu	Gly	Ile	Arg	Ser	Phe	Gly	Asp	Ala
130					135					140					
Gln	Gly	Cys	Thr	Glu	Leu	Leu	Asn	Val	Ala	His	Lys	Tyr	Thr	Met	Glu
145					150					155					160
His	Phe	Ile	Glu	Val	Ile	Lys	Asn	Gln	Glu	Phe	Leu	Leu	Leu	Pro	Ala
			165						170					175	
Asn	Glu	Ile	Ser	Lys	Leu	Leu	Cys	Ser	Asp	Asp	Ile	Asn	Val	Pro	Asp
			180					185					190		
Glu	Glu	Thr	Ile	Phe	His	Ala	Leu	Met	Gln	Trp	Val	Gly	His	Asp	Val
		195					200					205			
Gln	Asn	Arg	Gln	Gly	Glu	Leu	Gly	Met	Leu	Leu	Ser	Tyr	Ile	Arg	Leu
210					215					220					
Pro	Leu	Leu	Pro	Pro	Gln	Leu	Leu	Ala	Asp	Leu	Glu	Thr	Ser	Ser	Met
225					230					235					240
Phe	Thr	Gly	Asp	Leu	Glu	Cys	Gln	Lys	Leu	Leu	Met	Glu	Ala	Met	Lys
			245						250					255	
Tyr	His	Leu	Leu	Pro	Glu	Arg	Arg	Ser	Met	Met	Gln	Ser	Pro	Arg	Thr
		260						265					270		
Lys	Pro	Arg	Lys	Ser	Thr	Val	Gly	Ala	Leu	Tyr	Ala	Val	Gly	Gly	Met
	275						280					285			
Asp	Ala	Met	Lys	Gly	Thr	Thr	Thr	Ile	Glu	Lys	Tyr	Asp	Leu	Arg	Thr
290					295					300					
Asn	Ser	Trp	Leu	His	Ile	Gly	Thr	Met	Asn	Gly	Arg	Arg	Leu	Gln	Phe
305				310					315					320	
Gly	Val	Ala	Val	Ile	Asp	Asn	Lys	Leu	Tyr	Val	Val	Gly	Gly	Arg	Asp
			325						330					335	
Gly	Leu	Lys	Thr	Leu	Asn	Thr	Val	Glu	Cys	Phe	Asn	Pro	Val	Gly	Lys
		340						345					350		
Ile	Trp	Thr	Val	Met	Pro	Pro	Met	Ser	Thr	His	Arg	His	Gly	Leu	Gly
	355						360					365			
Val	Ala	Thr	Leu	Glu	Gly	Pro	Met	Tyr	Ala	Val	Gly	Gly	His	Asp	Gly
370					375					380					
Trp	Ser	Tyr	Leu	Asn	Thr	Val	Glu	Arg	Trp	Asp	Pro	Glu	Gly	Arg	Gln
385				390						395					400
Trp	Asn	Tyr	Val	Ala	Ser	Met	Ser	Thr	Pro	Arg	Ser	Thr	Val	Gly	Val
			405						410				415		
Val	Ala	Leu	Asn	Asn	Lys	Leu	Tyr	Ala	Ile	Gly	Gly	Arg	Asp	Gly	Ser

420	425	430
Ser Cys Leu Lys Ser Met Glu Tyr Phe Asp Pro His Thr Asn Lys Trp		
435	440	445
Ser Leu Cys Ala Pro Met Ser Lys Arg Arg Gly Gly Val Gly Val Ala		
450	455	460
Thr Tyr Asn Gly Phe Leu Tyr Val Val Gly Gly His Asp Ala Pro Ala		
465	470	475
Ser Asn His Cys Ser Arg Leu Ser Asp Cys Val Glu Arg Tyr Asp Pro		
485	490	495
Lys Gly Asp Ser Trp Ser Thr Val Ala Pro Leu Ser Val Pro Arg Asp		
500	505	510
Ala Val Ala Val Cys Pro Leu Gly Asp Lys Leu Tyr Val Val Gly Gly		
515	520	525
Tyr Asp Gly His Thr Tyr Leu Asn Thr Val Glu Ser Tyr Asp Ala Gln		
530	535	540
Arg Asn Glu Trp Lys Glu Glu Val Pro Val Asn Ile Gly Arg Ala Gly		
545	550	555
Ala Cys Val Val Val Val Lys Leu Pro		
565		

<210> 57
 <211> 748
 <212> PRT
 <213> Homo sapiens

<400> 57
 Met Ser Gly Ser Gly Arg Lys Asp Phe Asp Val Lys His Ile Leu Arg
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 Leu Arg Trp Lys Leu Phe Ser His Pro Ser Pro Ser Thr Gly Gly Pro
 20 25 30
 Ala Gly Gly Gly Cys Leu Gln Gln Asp Gly Ser Gly Ser Phe Glu His
 35 40 45
 Trp Gly Pro Ser Gln Ser Arg Leu Leu Lys Ser Gln Glu Arg Ser Gly
 50 55 60
 Val Ser Thr Phe Trp Lys Lys Pro Ser Ser Ser Ser Ser Ser Ser
 65 70 75 80
 Ser Pro Ser Ser Ser Ser Ser Ser Phe Asn Pro Leu Asn Gly Thr Leu
 85 90 95
 Leu Pro Val Ala Thr Arg Leu Gln Gln Gly Ala Pro Gly Gln Gly Thr
 100 105 110

Gln Gln Pro Ala Arg Thr Leu Phe Tyr Val Glu Ser Leu Glu Glu Glu
 115 120 125
 Val Val Pro Gly Met Asp Phe Pro Gly Pro His Glu Lys Gly Leu Val
 130 135 140
 Leu Gln Glu Leu Lys Val Glu Pro Asp Asn Ser Ser Gln Ala Thr Gly
 145 150 155 160
 Glu Gly Cys Gly His Arg Leu Ser Ser Thr Gly His Ser Met Thr Pro
 165 170 175
 Gln Ser Asp Leu Asp Ser Ser Ser Ser Glu Glu Phe Tyr Gln Ala Val
 180 185 190
 His His Ala Glu Gln Thr Phe Arg Lys Met Glu Ser Tyr Leu Lys Gln
 195 200 205
 Gln Gln Leu Cys Asp Val Ile Leu Ile Val Gly Asn Arg Lys Ile Pro
 210 215 220
 Ala His Arg Leu Val Leu Ser Ser Val Ser Asp Tyr Phe Ala Ala Met
 225 230 235 240
 Phe Thr Ser Asp Val Cys Glu Ala Lys Gln Glu Glu Ile Lys Met Glu
 245 250 255
 Gly Ile Asp Pro Asn Ala Leu Trp Asp Leu Val Gln Phe Ala Tyr Thr
 260 265 270
 Gly Cys Leu Glu Leu Lys Glu Asp Thr Ile Glu Asn Leu Leu Ala Ala
 275 280 285
 Ala Cys Leu Leu Gln Leu Pro Gln Val Val Glu Val Cys Cys His Phe
 290 295 300
 Leu Met Lys Leu Leu His Pro Ser Asn Cys Leu Gly Ile Arg Ala Phe
 305 310 315 320
 Ala Asp Ala Gln Gly Cys Ile Glu Leu Met Lys Val Ala His Ser Tyr
 325 330 335
 Thr Met Glu Asn Ile Met Glu Val Ile Arg Asn Gln Glu Phe Leu Leu
 340 345 350
 Leu Pro Ala Glu Glu Leu His Lys Leu Leu Ala Ser Asp Asp Val Asn
 355 360 365
 Val Pro Asp Glu Glu Thr Ile Phe His Ala Leu Met Met Trp Val Lys
 370 375 380
 Tyr Asp Met Gln Ser Arg Cys Asn Asp Leu Ser Met Leu Leu Ala Phe
 385 390 395 400
 Ile Arg Leu Pro Leu Leu Pro Pro Gln Ile Leu Ala Asp Leu Glu Asn
 405 410 415

His	Ala	Leu	Phe	Lys	Asn	Asp	Leu	Glu	Cys	Gln	Lys	Leu	Ile	Leu	Glu	420	425	430	
Ala	Met	Lys	Tyr	His	Leu	Leu	Pro	Glu	Arg	Arg	Thr	Leu	Met	Gln	Ser	435	440	445	
Pro	Arg	Thr	Lys	Pro	Arg	Lys	Ser	Thr	Val	Gly	Thr	Leu	Tyr	Ala	Val	450	455	460	
Gly	Gly	Met	Asp	Asn	Asn	Lys	Gly	Ala	Thr	Thr	Ile	Glu	Lys	Tyr	Asp	465	470	475	480
Leu	Arg	Thr	Asn	Leu	Trp	Ile	Gln	Ala	Gly	Met	Met	Asn	Gly	Arg	Arg	485	490	495	
Leu	Gln	Phe	Gly	Val	Ala	Val	Ile	Asp	Asp	Lys	Leu	Phe	Val	Ile	Gly	500	505	510	
Gly	Arg	Asp	Gly	Leu	Lys	Thr	Leu	Asn	Thr	Val	Glu	Cys	Tyr	Asn	Pro	515	520	525	
Lys	Thr	Lys	Thr	Trp	Thr	Val	Leu	Pro	Pro	Met	Ser	Thr	His	Arg	His	530	535	540	
Gly	Leu	Gly	Val	Thr	Val	Leu	Glu	Gly	Pro	Ile	Tyr	Ala	Val	Gly	Gly	545	550	555	560
His	Asp	Gly	Trp	Ser	Tyr	Leu	Asn	Thr	Val	Glu	Arg	Trp	Asp	Pro	Gln	565	570	575	
Ser	Gln	Gln	Trp	Thr	Phe	Val	Ala	Ser	Met	Ser	Ile	Ala	Arg	Ser	Thr	580	585	590	
Val	Gly	Val	Ala	Ala	Leu	Asn	Gly	Lys	Leu	Tyr	Ser	Val	Gly	Gly	Arg	595	600	605	
Asp	Gly	Ser	Ser	Cys	Leu	Ser	Ser	Met	Glu	Tyr	Tyr	Asp	Pro	His	Thr	610	615	620	
Asn	Lys	Trp	Asn	Met	Cys	Ala	Pro	Met	Cys	Lys	Arg	Arg	Gly	Gly	Val	625	630	635	640
Gly	Val	Ala	Thr	Cys	Asp	Gly	Phe	Leu	Tyr	Ala	Val	Gly	Gly	His	Asp	645	650	655	
Ala	Pro	Ala	Ser	Asn	His	Cys	Ser	Arg	Leu	Leu	Asp	Tyr	Val	Glu	Arg	660	665	670	
Tyr	Asp	Pro	Lys	Thr	Asp	Thr	Trp	Thr	Met	Val	Ala	Pro	Leu	Ser	Met	675	680	685	
Pro	Arg	Asp	Ala	Val	Gly	Val	Cys	Leu	Leu	Gly	Asp	Arg	Leu	Tyr	Ala	690	695	700	
Val	Gly	Gly	Tyr	Asp	Gly	Gln	Thr	Tyr	Leu	Asn	Thr	Met	Glu	Ser	Tyr	705	710	715	720

Asp Pro Gln Thr Asn Glu Trp Thr Gln Met Ala Ser Leu Asn Ile Gly
725 730 735

Arg Ala Gly Ala Cys Val Val Val Ile Lys Gln Pro
740 745

<210> 58

<211> 751

<212> PRT

<213> Mus musculus

<400> 58

Met Ser Gly Ser Gly Arg Lys Asp Phe Asp Val Lys His Ile Leu Arg
1 5 10 15

Leu Arg Trp Lys Leu Phe Ser His Pro Ser Pro Ala Ser Ser Ser Pro
20 25 30

Ala Gly Gly Ser Cys Leu Gln Gln Asp Ser Gly Gly Gly Ser Phe Glu
35 40 45

His Trp Gly Pro Ser Gln Ser Arg Leu Leu Lys Asn Gln Glu Lys Gly
50 55 60

Ser Val Ser Ala Phe Trp Lys Lys Pro Ser Ser Ser Ser Ser Ser
65 70 75 80

Ser Ser Ser Ser Ser Ser Ala Ser Ser Ser Pro Phe Asn Pro Leu Asn
85 90 95

Gly Thr Leu Leu Pro Val Ala Thr Arg Leu Gln Gln Gly Ala Pro Gly
100 105 110

Gln Gly Thr Gln Gln Pro Ala Arg Thr Leu Phe Tyr Val Glu Ser Leu
115 120 125

Glu Glu Glu Val Val Thr Gly Met Asp Phe Pro Gly Pro Gln Asp Lys
130 135 140

Gly Leu Ala Leu Lys Glu Leu Gln Ala Glu Pro Ala Ser Ser Ile Gln
145 150 155 160

Ala Thr Gly Glu Gly Cys Gly His Arg Leu Thr Ser Thr Asn His Ser
165 170 175

Leu Thr Pro Gln Ser Asp Leu Asp Ser Ser Ser Ser Glu Glu Phe Tyr
180 185 190

Gln Ala Val Arg His Ala Glu Gln Ser Phe Arg Lys Met Glu Asn Tyr
195 200 205

Leu Lys Gln Gln Gln Leu Cys Asp Val Ile Leu Ile Val Gly Asn Arg
210 215 220

Lys Ile Pro Ala His Arg Leu Val Leu Ser Ser Val Ser Asp Tyr Phe
225 230 235 240

Ala	Ala	Met	Phe	Thr	Ser	Asp	Val	Cys	Glu	Ala	Lys	Gln	Glu	Glu	Ile	245	250	255
Lys	Met	Glu	Gly	Ile	Asp	Pro	Asn	Ala	Leu	Trp	Asp	Leu	Val	Gln	Phe	260	265	270
Ala	Tyr	Thr	Gly	Cys	Leu	Glu	Leu	Lys	Glu	Asp	Thr	Ile	Glu	Asn	Leu	275	280	285
Leu	Ala	Ala	Ala	Cys	Leu	Leu	Gln	Leu	Pro	Gln	Val	Val	Glu	Val	Cys	290	295	300
Cys	His	Phe	Leu	Met	Lys	Leu	Leu	His	Pro	Ser	Asn	Cys	Leu	Gly	Ile	305	310	315
Arg	Ala	Phe	Ala	Asp	Ala	Gln	Gly	Cys	Ile	Glu	Leu	Met	Lys	Val	Ala	325	330	335
His	Ser	Tyr	Thr	Met	Glu	Asn	Ile	Met	Glu	Val	Ile	Arg	Asn	Gln	Glu	340	345	350
Phe	Leu	Leu	Leu	Pro	Ala	Glu	Glu	Leu	His	Lys	Leu	Leu	Ala	Ser	Asp	355	360	365
Asp	Val	Asn	Val	Pro	Asp	Glu	Glu	Thr	Ile	Phe	His	Ala	Leu	Met	Met	370	375	380
Trp	Val	Lys	Tyr	Asp	Met	Gln	Arg	Arg	Cys	Ser	Asp	Leu	Ser	Met	Leu	385	390	395
Leu	Ala	Phe	Ile	Arg	Leu	Pro	Leu	Leu	Pro	Pro	Gln	Ile	Leu	Ala	Asp	405	410	415
Leu	Glu	Asn	His	Ala	Leu	Phe	Lys	Asn	Asp	Leu	Glu	Cys	Gln	Lys	Leu	420	425	430
Ile	Leu	Glu	Ala	Met	Lys	Tyr	His	Leu	Leu	Pro	Glu	Arg	Arg	Thr	Leu	435	440	445
Met	Gln	Ser	Pro	Arg	Thr	Lys	Pro	Arg	Lys	Ser	Thr	Val	Gly	Thr	Leu	450	455	460
Tyr	Ala	Val	Gly	Gly	Met	Asp	Asn	Asn	Lys	Gly	Ala	Thr	Thr	Ile	Glu	465	470	475
Lys	Tyr	Asp	Leu	Arg	Thr	Asn	Leu	Trp	Ile	Gln	Ala	Gly	Met	Met	Asn	485	490	495
Gly	Arg	Arg	Leu	Gln	Phe	Gly	Val	Ala	Val	Ile	Asp	Asp	Lys	Leu	Phe	500	505	510
Val	Ile	Gly	Gly	Arg	Asp	Gly	Leu	Lys	Thr	Leu	Asn	Thr	Val	Glu	Cys	515	520	525
Tyr	Asn	Pro	Lys	Thr	Lys	Thr	Trp	Thr	Val	Leu	Pro	Pro	Met	Ser	Thr	530	535	540

His Arg His Gly Leu Gly Val Thr Val Leu Glu Gly Pro Ile Tyr Ala
 545 550 555 560
 Val Gly Gly His Asp Gly Trp Ser Tyr Leu Asn Thr Val Glu Arg Trp
 565 570 575
 Asp Pro Gln Ser Gln Gln Trp Thr Tyr Val Ala Ser Met Ser Ile Ala
 580 585 590
 Arg Ser Thr Val Gly Val Ala Ala Leu Asn Gly Lys Leu Tyr Ser Val
 595 600 605
 Gly Gly Arg Asp Gly Ser Ser Cys Leu Ser Ser Met Glu Tyr Tyr Asp
 610 615 620
 Pro His Thr Asn Lys Trp Ser Met Cys Pro Pro Met Cys Lys Lys Arg
 625 630 635 640
 Gly Gly Val Gly Val Ala Thr Cys Asp Gly Phe Leu Tyr Ala Val Gly
 645 650 655
 Gly His Asp Ala Pro Ala Ser Asn His Cys Ser Arg Leu Leu Asp Tyr
 660 665 670
 Val Glu Arg Tyr Glu Pro Lys Thr Asp Thr Trp Thr Met Val Ala Pro
 675 680 685
 Leu Ser Met Pro Arg Asp Ala Val Gly Val Cys Leu Leu Gly Asp Arg
 690 695 700
 Leu Tyr Ala Val Gly Gly Tyr Asp Gly Gln Thr Tyr Leu Asn Thr Met
 705 710 715 720
 Glu Ser Tyr Asp Pro Gln Thr Asn Glu Trp Thr Gln Met Ala Ser Leu
 725 730 735
 Asn Ile Gly Arg Ala Gly Ala Cys Val Val Val Ile Lys Gln Pro
 740 745 750

<210> 59

<211> 411

<212> PRT

<213> Homo sapiens

<400> 59

Met Glu His Phe Ile Glu Val Ile Lys Asn Gln Glu Phe Leu Leu Leu
 1 5 10 15

Pro Ala Asn Glu Ile Ser Lys Leu Leu Cys Ser Asp Asp Ile Asn Val
 20 25 30

Pro Asp Glu Glu Thr Ile Phe His Ala Leu Met Gln Trp Val Gly His
 35 40 45

Asp Val Gln Asn Arg Gln Gly Glu Leu Gly Met Leu Leu Ser Tyr Ile

50					55					60					
Arg	Leu	Pro	Leu	Leu	Pro	Pro	Gln	Leu	Leu	Ala	Asp	Leu	Glu	Thr	Ser
65					70					75					80
Ser	Met	Phe	Thr	Gly	Asp	Leu	Glu	Cys	Gln	Lys	Leu	Leu	Met	Glu	Ala
				85					90					95	
Met	Lys	Tyr	His	Leu	Leu	Pro	Glu	Arg	Arg	Ser	Met	Met	Gln	Ser	Pro
			100					105					110		
Arg	Thr	Lys	Pro	Arg	Lys	Ser	Thr	Val	Gly	Ala	Leu	Tyr	Ala	Val	Gly
		115					120						125		
Gly	Met	Asp	Ala	Met	Lys	Gly	Thr	Thr	Thr	Ile	Glu	Lys	Tyr	Asp	Leu
	130					135					140				
Arg	Thr	Asn	Ser	Trp	Leu	His	Ile	Gly	Thr	Met	Asn	Gly	Arg	Arg	Leu
145					150					155					160
Gln	Phe	Gly	Val	Ala	Val	Ile	Asp	Asn	Lys	Leu	Tyr	Val	Val	Gly	Gly
				165					170					175	
Arg	Asp	Gly	Leu	Lys	Thr	Leu	Asn	Thr	Val	Glu	Cys	Phe	Asn	Pro	Val
			180					185					190		
Gly	Lys	Ile	Trp	Thr	Val	Met	Pro	Pro	Met	Ser	Thr	His	Arg	His	Gly
		195					200					205			
Leu	Gly	Val	Ala	Thr	Leu	Glu	Gly	Pro	Met	Tyr	Ala	Val	Gly	Gly	His
	210					215					220				
Asp	Gly	Trp	Ser	Tyr	Leu	Asn	Thr	Val	Glu	Arg	Trp	Asp	Pro	Glu	Gly
225					230					235				240	
Arg	Gln	Trp	Asn	Tyr	Val	Ala	Ser	Met	Ser	Thr	Pro	Arg	Ser	Thr	Val
			245						250					255	
Gly	Val	Val	Ala	Leu	Asn	Asn	Lys	Leu	Tyr	Ala	Ile	Gly	Gly	Arg	Asp
			260					265					270		
Gly	Ser	Ser	Cys	Leu	Lys	Ser	Met	Glu	Tyr	Phe	Asp	Pro	His	Thr	Asn
		275					280					285			
Lys	Trp	Ser	Leu	Cys	Ala	Pro	Met	Ser	Lys	Arg	Arg	Gly	Gly	Val	Gly
	290					295					300				
Val	Ala	Thr	Tyr	Asn	Gly	Phe	Leu	Tyr	Val	Val	Gly	Gly	His	Asp	Ala
305					310					315				320	
Pro	Ala	Ser	Asn	His	Cys	Ser	Arg	Leu	Ser	Asp	Cys	Val	Glu	Arg	Tyr
			325						330				335		
Asp	Pro	Lys	Gly	Asp	Ser	Trp	Ser	Thr	Val	Ala	Pro	Leu	Ser	Val	Pro
			340					345					350		
Arg	Asp	Ala	Val	Ala	Val	Cys	Pro	Leu	Gly	Asp	Lys	Leu	Tyr	Val	Val

355

360

365

Gly Gly Tyr Asp Gly His Thr Tyr Leu Asn Thr Val Glu Ser Tyr Asp
 370 375 380

Ala Gln Arg Asn Glu Trp Lys Glu Glu Val Pro Val Asn Ile Gly Arg
 385 390 395 400

Ala Gly Ala Cys Val Val Val Val Lys Leu Pro
 405 410

<210> 60

<211> 1339

<212> DNA

<213> Homo sapiens

<400> 60

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tgcttcgctt ccctggccct ggtccggcgc taccttcacc acctcctgct gtgggtggag 240
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atttacgaac agagaaataa ctcaaatatt atttctgctt agtgctttta tttataaagc 1260
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1339

<210> 61

<211> 186

<212> PRT

<213> Homo sapiens

<400> 61

Met Gly Leu Met Met Val Gly Val Leu Ile Gly Thr Phe Ile Ala His
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Val Val Cys Lys Arg Leu Leu Thr Ala Trp Val Ala Ala Arg Ile Gln
 20 25 30

Ser Ser Glu Lys Leu Ser Ala Val Ile Arg Val Val Glu Gly Gly Ser
 35 40 45

Gly Leu Lys Val Val Ala Leu Ala Arg Leu Thr Pro Ile Pro Phe Gly
 50 55 60
 Leu Gln Asn Ala Val Phe Ser Ile Thr Asp Leu Ser Leu Pro Asn Tyr
 65 70 75 80
 Leu Met Ala Ser Ser Val Gly Leu Leu Pro Thr Gln Leu Leu Asn Ser
 85 90 95
 Tyr Leu Gly Thr Thr Leu Arg Thr Met Glu Asp Val Ile Ala Glu Gln
 100 105 110
 Ser Val Ser Gly Tyr Phe Val Phe Cys Leu Gln Ile Ile Ile Ser Ile
 115 120 125
 Gly Leu Met Phe Tyr Val Val His Arg Ala Gln Val Glu Leu Asn Ala
 130 135 140
 Ala Ile Val Ala Cys Glu Met Glu Leu Lys Ser Ser Leu Val Lys Gly
 145 150 155 160
 Asn Gln Pro Asn Thr Ser Gly Ser Ser Phe Tyr Asn Lys Arg Thr Leu
 165 170 175
 Thr Phe Ser Gly Gly Gly Ile Asn Val Val
 180 185

<210> 62
 <211> 512
 <212> DNA
 <213> Homo sapiens

<400> 62
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 tcgtgctcaa cgtggccgct ggctacctgt acggcttcgt gctgggcatg ggtctgatga 120
 tgggtggcgt cctcatcggc accttcacgc cccatgtggg ctgcaagcgg ctccctcaccg 180
 cctgggtggc cgccaggatc cagagcagcg agaagctgag cgcggttatt cgcgtagtgg 240
 agggaggaag cggcctgaaa gtggtggcgc tggccagact gacacccata ccttttgggc 300
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 <213> Homo sapiens

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35 40 45

Gly Leu Lys Val Val Ala Leu Ala Arg Leu Thr Pro Ile Pro Phe Gly
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Leu Gln Asn Ala Val Phe Ser Ile Ile Ile Ser Ile Gly Leu Met Phe
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Tyr Val Val His Arg Ala Gln Val Glu Leu Asn Ala Ala Ile Val Ala
85 90 95

Cys Glu Met Glu Leu Lys Ser Ser Leu Val Lys Gly Asn Gln Pro Asn
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Thr Ser Gly Ser Ser Phe Tyr Asn Lys Arg Thr Leu Thr Phe Ser Gly
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Gly Gly Ile Asn Val Val
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<210> 64
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<212> DNA
<213> Homo sapiens

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<210> 65
<211> 216
<212> PRT
<213> Homo sapiens

<400> 65
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35 40 45

Cys Lys Arg Leu Leu Thr Ala Trp Val Ala Ala Arg Ile Gln Ser Ser
 50 55 60
 Glu Lys Leu Ser Ala Val Ile Arg Val Val Glu Gly Gly Ser Gly Leu
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 Lys Val Val Ala Leu Ala Arg Leu Thr Pro Ile Pro Phe Gly Leu Gln
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 Asn Ala Val Phe Ser Ile Thr Asp Leu Ser Leu Pro Asn Tyr Leu Met
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 Ala Ser Ser Val Gly Leu Leu Pro Thr Gln Leu Leu Asn Ser Tyr Leu
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 Gly Thr Thr Leu Arg Thr Met Glu Asp Val Ile Ala Glu Gln Ser Val
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 Ser Gly Tyr Phe Val Phe Cys Leu Gln Ile Ile Ile Ser Ile Gly Leu
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 Met Phe Tyr Val Val His Arg Ala Gln Val Glu Leu Asn Ala Ala Ile
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 Val Ala Cys Glu Met Glu Leu Lys Ser Ser Leu Val Lys Gly Asn Gln
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 Pro Asn Thr Ser Gly Ser Ser Phe Tyr Asn Lys Arg Thr Leu Thr Phe
 195 200 205
 Ser Gly Gly Gly Ile Asn Val Val
 210 215

<210> 66
 <211> 209
 <212> PRT
 <213> Synechococcus sp.

<400> 66
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 Val Phe Leu Pro Gly Ser Ile Leu Thr Leu Gly Ala Gly Val Val Phe
 35 40 45
 Gly Val Ile Leu Gly Ser Ile Tyr Val Phe Ile Gly Ala Thr Leu Gly
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 Ala Thr Ala Ala Phe Leu Val Gly Arg Tyr Leu Ala Arg Gly Trp Val
 65 70 75 80
 Ala Lys Lys Ile Ala Gly Asn Gln Lys Phe Lys Ala Ile Asp Glu Ala

	85		90		95
Val Gly Lys Glu Gly Leu Lys Ile Val Ile Leu Thr Arg Leu Ser Pro	100		105		110
Val Phe Pro Phe Asn Leu Leu Asn Tyr Ala Tyr Gly Ile Thr Asn Val	115		120		125
Ser Leu Lys Asp Tyr Val Ile Gly Ser Leu Gly Met Ile Pro Gly Thr	130		135		140
Ile Met Tyr Val Tyr Ile Gly Ser Leu Ala Gly Ser Leu Ala Thr Leu	145		150		155
Gly Thr Ala Thr Asn Gln Ala Asn Pro Thr Leu Gln Trp Thr Ile Arg		165		170	175
Ile Val Gly Phe Ile Ala Thr Val Ala Val Thr Ile Tyr Val Thr Lys		180		185	190
Ile Ala Arg Lys Ala Leu Asn Glu Ala Ile Leu Thr Ser Glu Val Asp		195		200	205
Glu					

<210> 67
 <211> 444
 <212> PRT
 <213> Drosophila melanogaster

<400> 67

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Ala Leu Val Phe Ile Gly Trp Ala Thr Arg Asp Tyr Ala Arg Gln Leu	35	40	45	
Leu Phe Trp Ile Glu Met Gln Asn Ala Trp Ile Thr Phe Ala Val Tyr	50	55	60	
Met Gly Leu Phe Ala Leu Val Ser Phe Pro Val Val Val Gly Tyr Phe	65	70	75	80
Val Leu Leu Ile Thr Ala Gly Tyr Leu Phe Gly Cys Leu Arg Gly Trp	85	90	95	
Val Thr Val Ile Leu Gly Ala Asn Ile Gly Ile Ala Val Ala His Ala	100	105	110	
Thr Ile Arg Ser Cys Arg His Arg Ile Pro Val Gln Ser Pro Tyr Ile	115	120	125	

Thr	His	Cys	Ser	Val	Cys	Phe	Leu	Tyr	Ser	Pro	Met	Leu	Arg	Phe	Leu	130	135	140	
Arg	Asn	Phe	Lys	Tyr	Tyr	Ala	Trp	Gln	Glu	Val	Arg	Arg	Gly	Cys	Ser	145	150	155	160
Val	Val	Ala	Pro	Pro	Asp	Arg	Ser	Asp	Val	Leu	Leu	Val	Leu	Pro	Thr	165	170	175	
Val	Trp	Pro	Ser	Glu	Leu	Thr	Lys	Arg	Ile	Arg	Pro	Leu	Ser	Val	Pro	180	185	190	
Asp	Leu	Ile	Glu	Lys	Phe	Ser	Cys	Asp	Ala	Pro	Gly	Gly	Gln	Phe	Ala	195	200	205	
Thr	Met	Ser	Glu	Tyr	Leu	Arg	Ser	Asp	Pro	Arg	Pro	Asp	Gly	Val	Leu	210	215	220	
Leu	Pro	Asp	Glu	Ile	Asp	Leu	His	Arg	Lys	Met	Ser	Leu	Asp	Asp	Leu	225	230	235	240
Asn	Ser	Tyr	Met	His	Ala	Lys	Asp	Ala	Phe	Lys	Glu	Pro	His	Arg	Lys	245	250	255	
Asn	Arg	Ile	Phe	Ser	His	Val	Leu	Val	Val	Ala	Gly	Ala	Asp	Ser	Ala	260	265	270	
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Cys	Leu	Arg	Pro	Gly	Ala	Ala	Leu	Val	Leu	Thr	Arg	Ser	Arg	Lys	Arg	290	295	300	
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Ala	Met	Leu	Lys	Lys	Ser	Leu	Leu	Trp	Leu	Leu	Arg	Asp	His	Ser	Pro	340	345	350	
Glu	Leu	Trp	His	Phe	Tyr	Asp	Pro	Ser	Ser	Pro	Val	Ser	Cys	Ile	Val	355	360	365	
Gln	Glu	Val	Ala	Asn	Glu	Ala	Lys	Ile	Pro	Met	Gly	Asn	Pro	Arg	Tyr	370	375	380	
Ile	Leu	Gln	Tyr	Thr	Arg	Thr	Val	Lys	Thr	Ser	Arg	Glu	Leu	Arg	Ala	385	390	395	400
Leu	Arg	Arg	Ala	Asn	Ala	Thr	Ala	Ala	Asp	Ser	Met	Ala	Glu	Val	Ile	405	410	415	
Ala	Gln	His	His	Gln	Ile	Pro	Gln	Glu	Leu	Ala	Ala	Ser	Phe	Asp	Tyr	420	425	430	

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<210> 68
 <211> 269
 <212> PRT
 <213> Arabidopsis thaliana

<400> 68
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 Tyr Pro Lys Phe Gln Ala Val Ser Val Ala Ile Gln Lys Ser Gly Phe
 115 120 125
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 145 150 155 160
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<210> 69

<211> 225

<212> PRT

<213> unidentified bacterium

<400> 69

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 35 40 45

Phe Gly Val Val Glu Gly Ser Leu Leu Ala Leu Leu Gly Ala Val Leu
 50 55 60

Gly Gly Thr Ala Ala Phe Leu Ile Gly Arg His Tyr Ala Arg Ala Ala
 65 70 75 80

Val Glu Arg Arg Val Ala Ser Asn Pro Thr Leu Ser Ala Leu Asp His
 85 90 95

Val Ile Gly Glu Asp Gly Leu Lys Leu Val Phe Leu Leu Arg Leu Ser
 100 105 110

Pro Ala Val Pro Phe Val Leu Thr Asn Tyr Ala Leu Ser Ile Thr Arg
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Val Arg Leu Arg Asp Phe Phe Ile Gly Thr Leu Gly Leu Ala Pro Ile
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Val Val Met Tyr Ala Ala Tyr Gly Ser Ala Ser Gly Ala Thr Pro Asn
 145 150 155 160

Ala Asp Gly Ser Ala Ala Val Thr Pro Met Met Phe Thr Ala Gly Ile
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Val Val Thr Val Leu Leu Gly Leu Leu Leu Ala Lys Ile Val Gln Lys
 180 185 190

Ala Leu Arg Glu Ala Glu Leu Ser Arg Leu Lys Gln Leu Glu Ile Asp
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Ala Thr Pro Glu Thr Pro Thr Val Leu Pro Thr Pro Ile Thr Glu Ser
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<210> 70
 <211> 6540
 <212> DNA
 <213> Homo sapiens

<400> 70

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<211> 139
<212> PRT
<213> Homo sapiens

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Gln Lys Ile Lys Ser Arg Leu Thr Lys Ala Met Trp Asn Val Asp Thr
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Trp Gly Gln Leu Asn Thr Leu Gln Val Ser Ala Val Arg Phe Glu Ala
100 105 110
Leu Lys Ala Glu Ile Asn Gly Gln Ile Phe Lys Gly Lys Gly Tyr Arg
115 120 125
Cys Val Gln Val Ser Pro Arg Gln Met Asp Leu
130 135

<210> 72
<211> 2760
<212> DNA
<213> Homo sapiens

<400> 72
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ttggccagga tggtttcaaa ctctgacct catgatctgc ccacctaggc ctcccaaagt 180
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taaagagcct ggaggattat agcttacaga gcagagaaga actctgatac tcatacctgc 300
atagtgctag ctagtca gacaatactt agataattca ttttctgatt tctgacatta 360
gtgagagggt ggggttttgt ttgtttaata acagccttca tttagatctt tgcaaacagc 420
cttgaatgag gaatgtcctt atgtttcagg gaacatatca ggcctggaag cagctttttt 480
aggataaagc tcactcattg aacttcaa atgcactgactc caaccatttc ctaaaataag 540
gaaaatctgt ctgcacagac ggcattttca ctctcctgaa tgttttctgt tgggttggtg 600
gttggttggt tttattggtt ggttggtttt gatacagagt gatacaatat catgaagaat 660
attagtcaga aatggggcac aggtctcaag caggctctgg gaccttgggc tattaatctt 720
tctgggcctt aatttactta tctataacat aaaaggacct taatatatga ttgagaaggc 780
ccaaaccacc tttaaaattt agatctgtgt ctcccatca gacctctctg gagacacagg 840

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<210> 73

<211> 104

<212> PRT

<213> Homo sapiens

<400> 73

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Phe Leu Phe Pro Pro Gly Ala Ser Lys Leu Gln Leu Ser Leu Gln Ser
20 25 30

Asp Arg Arg Lys Leu Ala Phe Ile Lys His Gln Leu Cys Ala Trp Lys
35 40 45

Ile His Leu Gln Tyr His Asn Leu Tyr Asn Asn Ser Ala Ile Trp Ile
50 55 60

Ser Leu Ser Ala Phe Phe Phe Cys Leu Phe Gly Trp Leu Val Leu Val
65 70 75 80

Val Leu Val Ser Gly Ser His Ser Val Ala Gln Ala Gly Ala Trp Trp
85 90 95

His Asp His Asn Ser Leu Gln Pro
100

<210> 74
<211> 1183
<212> DNA
<213> Homo sapiens

<400> 74
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catggggcag ctgatccatc cctgggtgtac aaactgctga ctgcagacag atgctgagct 180
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<210> 75
<211> 261
<212> PRT
<213> Homo sapiens

<400> 75
Met Gly Ser Leu Pro Ser Arg Arg Lys Ser Leu Pro Ser Pro Ser Leu
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Ser Ser Ser Val Gln Gly Gln Gly Pro Val Thr Met Glu Ala Glu Arg
20 25 30
Ser Lys Ala Thr Ala Val Ala Leu Gly Ser Phe Pro Ala Gly Gly Pro
35 40 45
Ala Glu Leu Ser Leu Arg Leu Gly Glu Pro Leu Thr Ile Val Ser Glu
50 55 60
Asp Gly Asp Trp Trp Thr Val Leu Ser Glu Val Ser Gly Arg Glu Tyr
65 70 75 80
Asn Ile Pro Ser Val His Val Gly Lys Val Ser His Gly Trp Leu Tyr
85 90 95

Glu Gly Leu Ser Arg Glu Lys Ala Glu Glu Leu Leu Leu Leu Pro Gly
 100 105 110
 Asn Pro Gly Gly Ala Phe Leu Ile Arg Glu Ser Gln Thr Arg Arg Gly
 115 120 125
 Ser Tyr Ser Leu Ser Val Arg Leu Ser Arg Pro Ala Ser Trp Asp Arg
 130 135 140
 Ile Arg His Tyr Arg Ile His Cys Leu Asp Asn Gly Trp Leu Tyr Ile
 145 150 155 160
 Ser Pro Arg Leu Thr Phe Pro Ser Leu Gln Ala Leu Val Asp His Tyr
 165 170 175
 Ser Glu Leu Ala Asp Asp Ile Cys Cys Leu Leu Lys Glu Pro Cys Val
 180 185 190
 Leu Gln Arg Ala Gly Pro Leu Pro Gly Lys Asp Ile Pro Leu Pro Val
 195 200 205
 Thr Val Gln Arg Thr Pro Leu Asn Trp Lys Glu Leu Asp Ser Ser Leu
 210 215 220
 Leu Phe Ser Glu Ala Ala Thr Gly Glu Glu Ser Leu Leu Ser Glu Gly
 225 230 235 240
 Leu Arg Glu Ser Leu Ser Phe Tyr Ile Ser Leu Asn Asp Glu Ala Val
 245 250 255
 Ser Leu Asp Asp Ala
 260

<210> 76
 <211> 1183
 <212> DNA
 <213> Homo sapiens

<400> 76
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 ccggagaccc tcactgagaa gagactcctc ccctgtggca gcttcagaaa acaggagggga 120
 gctgtccagc tctttccagt tgagtgggtg cctctgcaca gtcacaggta ggggtatatac 180
 cttgccaggg agcggggccag ccctctgcag gacacagggc tccttgagta ggcagcagat 240
 gtcacccgcc agctcagagt aatgggtccac cagggcctgg agtgagggga aggtgaggcg 300
 cggtgagatg tacagccagc cattgtcaag gcagtggatc ctgtagtgtc tgatccggtc 360
 ccaggatgca gggcggctga ggcggactga cagagagtaa gagcctctcc tgggtctggct 420
 ctcccggatg aggaaggccc ctccaggggt cccaggtaac aacagcagtt cctctgcttt 480
 ctccctgctc aggcctcat acagccaccc atgggagact ttgcccacgt ggacgctggg 540
 gatgttatac tctctgcctg agacttcaga cagcaccgtc caccagtctc catcctcaga 600
 gacgatggtc aatgggtccc cgagtctcag cgacagctcg gccggggccac ctgccgggaa 660
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 gccttggaaca gaggaactca agcttgggct tggcagagat tttcttctgc tgggcagact 780
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<210> 77

<211> 261

<212> PRT

<213> Homo sapiens

<400> 77

Met	Gly	Ser	Leu	Pro	Ser	Arg	Arg	Lys	Ser	Leu	Pro	Ser	Pro	Ser	Leu	
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Ser	Ser	Ser	Val	Gln	Gly	Gln	Gly	Pro	Val	Thr	Met	Glu	Ala	Glu	Arg	
			20				25						30			
Ser	Lys	Ala	Thr	Ala	Val	Ala	Leu	Gly	Ser	Phe	Pro	Ala	Gly	Gly	Pro	
		35					40					45				
Ala	Glu	Leu	Ser	Leu	Arg	Leu	Gly	Glu	Pro	Leu	Thr	Ile	Val	Ser	Glu	
	50					55					60					
Asp	Gly	Asp	Trp	Trp	Thr	Val	Leu	Ser	Glu	Val	Ser	Gly	Arg	Glu	Tyr	
65					70					75					80	
Asn	Ile	Pro	Ser	Val	His	Val	Ala	Lys	Val	Ser	His	Gly	Trp	Leu	Tyr	
				85				90						95		
Glu	Gly	Leu	Ser	Arg	Glu	Lys	Ala	Glu	Glu	Leu	Leu	Leu	Leu	Pro	Gly	
		100					105						110			
Asn	Pro	Gly	Gly	Ala	Phe	Leu	Ile	Arg	Glu	Ser	Gln	Thr	Arg	Arg	Gly	
		115				120						125				
Ser	Tyr	Ser	Leu	Ser	Val	Arg	Leu	Ser	Arg	Pro	Ala	Ser	Trp	Asp	Arg	
	130					135					140					
Ile	Arg	His	Tyr	Arg	Ile	His	Cys	Leu	Asp	Asn	Gly	Trp	Leu	Tyr	Ile	
145					150					155					160	
Ser	Pro	Arg	Leu	Thr	Phe	Pro	Ser	Leu	Gln	Ala	Leu	Val	Asp	His	Tyr	
			165						170				175			
Ser	Glu	Leu	Ala	Asp	Asp	Ile	Cys	Cys	Leu	Leu	Lys	Glu	Pro	Cys	Val	
		180					185						190			
Leu	Gln	Arg	Ala	Gly	Pro	Leu	Pro	Gly	Lys	Asp	Ile	Pro	Leu	Pro	Val	
	195					200						205				
Thr	Val	Gln	Arg	Thr	Pro	Leu	Asn	Trp	Lys	Glu	Leu	Asp	Ser	Ser	Leu	
	210					215					220					
Leu	Phe	Ser	Glu	Ala	Ala	Thr	Gly	Glu	Glu	Ser	Leu	Leu	Ser	Glu	Gly	
225				230						235					240	
Leu	Arg	Glu	Ser	Leu	Ser	Phe	Tyr	Ile	Ser	Leu	Asn	Asp	Glu	Ala	Val	

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Ser Leu Asp Asp Ala		
260		
<210> 78		
<211> 197		
<212> PRT		
<213> Homo sapiens		
<400> 78		
Asp Gly Asp Trp Trp Thr Val Leu Ser Glu Val Ser Gly Arg Glu Tyr		
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Asn Ile Pro Ser Val His Val Ala Lys Val Ser His Gly Trp Leu Tyr		
20	25	30
Glu Gly Leu Ser Arg Glu Lys Ala Glu Glu Leu Leu Leu Leu Pro Gly		
35	40	45
Asn Pro Gly Gly Ala Phe Leu Ile Arg Glu Ser Gln Thr Arg Arg Gly		
50	55	60
Ser Tyr Ser Leu Ser Val Arg Leu Ser Arg Pro Ala Ser Trp Asp Arg		
65	70	75 80
Ile Arg His Tyr Arg Ile His Cys Leu Asp Asn Gly Trp Leu Tyr Ile		
85	90	95
Ser Pro Arg Leu Thr Phe Pro Ser Leu Gln Ala Leu Val Asp His Tyr		
100	105	110
Ser Glu Leu Ala Asp Asp Ile Cys Cys Leu Leu Lys Glu Pro Cys Val		
115	120	125
Leu Gln Arg Ala Gly Pro Leu Pro Gly Lys Asp Ile Pro Leu Pro Val		
130	135	140
Thr Val Gln Arg Thr Pro Leu Asn Trp Lys Glu Leu Asp Ser Ser Leu		
145	150	155 160
Leu Phe Ser Glu Ala Ala Thr Gly Glu Glu Ser Leu Leu Ser Glu Gly		
165	170	175
Leu Arg Glu Ser Leu Ser Phe Tyr Ile Ser Leu Asn Asp Glu Ala Val		
180	185	190
Ser Leu Asp Asp Ala		
195		

<210> 79
 <211> 179
 <212> PRT
 <213> Mus musculus

<400> 79

Met Pro Ser Val Tyr Val Ala Lys Val Ala His Gly Trp Leu Tyr Glu
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Gly Leu Ser Arg Glu Lys Ala Glu Glu Leu Leu Leu Pro Gly Asn
20 25 30

Pro Gly Gly Ala Phe Leu Ile Arg Glu Ser Gln Thr Arg Arg Gly Cys
35 40 45

Tyr Ser Leu Ser Val Arg Leu Ser Arg Pro Ala Ser Trp Asp Arg Ile
50 55 60

Arg His Tyr Arg Ile Gln Arg Leu Asp Asn Gly Trp Leu Tyr Ile Ser
65 70 75 80

Pro Arg Leu Thr Phe Pro Ser Leu His Ala Leu Val Glu His Tyr Ser
85 90 95

Glu Leu Ala Asp Gly Ile Cys Cys Pro Leu Arg Glu Pro Cys Val Leu
100 105 110

Gln Lys Leu Gly Pro Leu Pro Gly Lys Asp Thr Pro Pro Pro Val Thr
115 120 125

Val Pro Thr Ser Ser Leu Asn Trp Lys Lys Leu Asp Arg Ser Leu Leu
130 135 140

Phe Leu Glu Ala Pro Ala Ser Gly Glu Ala Ser Leu Leu Ser Glu Gly
145 150 155 160

Leu Arg Glu Ser Leu Ser Ser Tyr Ile Ser Leu Ala Glu Asp Pro Leu
165 170 175

Asp Asp Ala

<210> 80

<211> 281

<212> PRT

<213> Mus musculus

<400> 80

Met Gly Asn Ser Met Lys Ser Thr Ser Pro Pro Ser Glu Arg Pro Leu
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Ser Ser Ser Glu Gly Leu Glu Ser Asp Phe Leu Ala Val Leu Thr Asp
20 25 30

Tyr Pro Ser Pro Asp Ile Ser Pro Pro Ile Phe Arg Arg Gly Glu Lys
35 40 45

Leu Arg Val Ile Ser Asp Glu Gly Gly Trp Trp Lys Ala Ile Ser Leu
50 55 60

Ser Thr Gly Arg Glu Ser Tyr Ile Pro Gly Ile Cys Val Ala Arg Val

65		70		75		80
Tyr His Gly Trp Leu Phe Glu Gly Leu Gly Arg Asp Lys Ala Glu Glu						
	85			90		95
Leu Leu Gln Leu Pro Asp Thr Lys Ile Gly Ser Phe Met Ile Arg Glu						
	100			105		110
Ser Glu Thr Lys Lys Gly Phe Tyr Ser Leu Ser Val Arg His Arg Gln						
	115			120		125
Val Lys His Tyr Arg Ile Phe Arg Leu Pro Asn Asn Trp Tyr Tyr Ile						
	130			135		140
Ser Pro Arg Leu Thr Phe Gln Cys Leu Glu Asp Leu Val Thr His Tyr						
	145			150		155
Ser Glu Val Ala Asp Gly Leu Cys Cys Val Leu Thr Thr Pro Cys Leu						
	165			170		175
Ala Gln Asn Ile Pro Ala Pro Thr Ser His Pro Ser Pro Cys Thr Ser						
	180			185		190
Pro Gly Ser Pro Val Thr Leu Arg Gln Lys Thr Phe Asp Trp Lys Arg						
	195			200		205
Val Ser Arg Leu Gln Glu Gly Ser Glu Gly Ala Glu Asn Pro Leu Arg						
	210			215		220
Val Asp Glu Ser Leu Phe Ser Tyr Gly Leu Arg Glu Ser Ile Ala Ser						
	225			230		235
Tyr Leu Ser Leu Thr Gly Asp Asp Ser Ser Ser Phe Asp Arg Lys Lys						
	245			250		255
Lys Ser Leu Ser Leu Met Tyr Thr Gly Ser Lys Arg Lys Ser Ser Phe						
	260			265		270
Phe Ser Ala Pro Gln Tyr Phe Glu Asp						
	275			280		

<210> 81
 <211> 276
 <212> PRT
 <213> Homo sapiens

<400> 81
 Met Gly Asn Ser Met Lys Ser Thr Pro Ala Pro Ala Glu Arg Pro Leu
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 Pro Asn Pro Glu Gly Leu Asp Ser Asp Phe Leu Ala Val Leu Ser Asp
 20 25 30
 Tyr Pro Ser Pro Asp Ile Ser Pro Pro Ile Phe Arg Arg Gly Glu Lys
 35 40 45

Leu Arg Val Ile Ser Asp Glu Gly Gly Trp Trp Lys Ala Ile Ser Leu
 50 55 60
 Ser Thr Gly Arg Glu Ser Tyr Ile Pro Gly Ile Cys Val Ala Arg Val
 65 70 75 80
 Tyr His Gly Trp Leu Phe Glu Gly Leu Gly Arg Asp Lys Ala Glu Glu
 85 90 95
 Leu Leu Gln Leu Pro Asp Thr Lys Val Gly Ser Phe Met Ile Arg Glu
 100 105 110
 Ser Glu Thr Lys Lys Gly Phe Tyr Ser Leu Ser Val Arg His Arg Gln
 115 120 125
 Val Lys His Tyr Arg Ile Phe Arg Leu Pro Asn Asn Trp Tyr Tyr Ile
 130 135 140
 Ser Pro Arg Leu Thr Phe Gln Cys Leu Glu Asp Leu Val Asn His Tyr
 145 150 155 160
 Ser Glu Val Ala Asp Gly Leu Cys Cys Val Leu Thr Thr Pro Cys Leu
 165 170 175
 Thr Gln Ser Thr Ala Ala Pro Ala Val Arg Ala Ser Ser Ser Pro Val
 180 185 190
 Thr Leu Arg Gln Lys Thr Val Asp Trp Arg Arg Val Ser Arg Leu Gln
 195 200 205
 Glu Asp Pro Glu Gly Thr Glu Asn Pro Leu Gly Val Asp Glu Ser Leu
 210 215 220
 Phe Ser Tyr Gly Leu Arg Glu Ser Ile Ala Ser Tyr Leu Ser Leu Thr
 225 230 235 240
 Ser Glu Asp Asn Thr Ser Phe Asp Arg Lys Lys Lys Ser Ile Ser Leu
 245 250 255
 Met Tyr Gly Gly Ser Lys Arg Lys Ser Ser Phe Phe Ser Ser Pro Pro
 260 265 270
 Tyr Phe Glu Asp
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<210> 82
 <211> 5193
 <212> DNA
 <213> Homo sapiens

<400> 82
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 ggctgggtg cctgcatct acctgtgggt cgccctgccc tgctacttgc tctacctgct 240
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cctgtttttc	tgggtggttca	caaagatggc	catctatggc	taccggcatc	ccctggagga	780
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aagaaagacc	atctccccag	gctatgccat	caccatacac	agtggcacct	tcacctgggc	1980
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 <212> PRT
 <213> Homo sapiens

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Ser Asn Leu Ser Val His Thr Glu Asn Pro Asp Leu Thr Pro Cys Phe
      20              25              30

Gln Asn Ser Leu Leu Ala Trp Val Pro Cys Ile Tyr Leu Trp Val Ala
      35              40              45

Leu Pro Cys Tyr Leu Leu Tyr Leu Arg His His Cys Arg Gly Tyr Ile
      50              55              60

Ile Leu Ser His Leu Ser Lys Leu Lys Met Val Leu Gly Val Leu Leu
      65              70              75              80

Trp Cys Val Ser Trp Ala Asp Leu Phe Tyr Ser Phe His Gly Leu Val
      85              90              95

His Gly Arg Ala Pro Ala Pro Val Phe Phe Val Thr Pro Leu Val Val
      100             105             110

Gly Val Thr Met Leu Leu Ala Thr Leu Leu Ile Gln Tyr Glu Arg Leu
      115             120             125

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Gln Gly Val Gln Ser Ser Gly Val Leu Ile Ile Phe Trp Phe Leu Cys
 130 135 140
 Val Val Cys Ala Ile Val Pro Phe Arg Ser Lys Ile Leu Leu Ala Lys
 145 150 155 160
 Ala Glu Gly Glu Ile Ser Asp Pro Phe Arg Phe Thr Thr Phe Tyr Ile
 165 170 175
 His Phe Ala Leu Val Leu Ser Ala Leu Ile Leu Ala Cys Phe Arg Glu
 180 185 190
 Lys Pro Pro Phe Phe Ser Ala Lys Asn Val Asp Pro Asn Pro Tyr Pro
 195 200 205
 Glu Thr Ser Ala Gly Phe Leu Ser Arg Leu Phe Phe Trp Trp Phe Thr
 210 215 220
 Lys Met Ala Ile Tyr Gly Tyr Arg His Pro Leu Glu Glu Lys Asp Leu
 225 230 235 240
 Trp Ser Leu Lys Glu Glu Asp Arg Ser Gln Met Val Val Gln Gln Leu
 245 250 255
 Leu Glu Ala Trp Arg Lys Gln Glu Lys Gln Thr Ala Arg His Lys Ala
 260 265 270
 Ser Ala Ala Pro Gly Lys Asn Ala Ser Gly Glu Asp Glu Val Leu Leu
 275 280 285
 Gly Ala Arg Pro Arg Pro Arg Lys Pro Ser Phe Leu Lys Ala Leu Leu
 290 295 300
 Ala Thr Phe Gly Ser Ser Phe Leu Ile Ser Ala Cys Phe Lys Leu Ile
 305 310 315 320
 Gln Asp Leu Leu Ser Phe Ile Asn Pro Gln Leu Leu Ser Ile Leu Ile
 325 330 335
 Arg Phe Ile Ser Asn Pro Met Ala Pro Ser Trp Trp Gly Phe Leu Val
 340 345 350
 Ala Gly Leu Met Phe Leu Cys Ser Met Met Gln Ser Leu Ile Leu Gln
 355 360 365
 His Tyr Tyr His Tyr Ile Phe Val Thr Gly Val Lys Phe Arg Thr Gly
 370 375 380
 Ile Met Gly Val Ile Tyr Arg Lys Ala Leu Val Ile Thr Asn Ser Val
 385 390 395 400
 Lys Arg Ala Ser Thr Val Gly Glu Ile Val Asn Leu Met Ser Val Asp
 405 410 415
 Ala Gln Arg Phe Met Asp Leu Ala Pro Phe Leu Asn Leu Leu Trp Ser
 420 425 430

Ala	Pro	Leu	Gln	Ile	Ile	Leu	Ala	Ile	Tyr	Phe	Leu	Trp	Gln	Asn	Leu	
		435						440					445			
Gly	Pro	Ser	Val	Leu	Ala	Gly	Val	Ala	Phe	Met	Val	Leu	Leu	Ile	Pro	
		450				455					460					
Leu	Asn	Gly	Ala	Val	Ala	Val	Lys	Met	Arg	Ala	Phe	Gln	Val	Lys	Gln	
465					470					475					480	
Met	Lys	Leu	Lys	Asp	Ser	Arg	Ile	Lys	Leu	Met	Ser	Glu	Ile	Leu	Asn	
				485					490						495	
Gly	Ile	Lys	Val	Leu	Lys	Leu	Tyr	Ala	Trp	Glu	Pro	Ser	Phe	Leu	Lys	
			500					505						510		
Gln	Val	Glu	Gly	Ile	Arg	Gln	Gly	Glu	Leu	Gln	Leu	Leu	Arg	Thr	Ala	
		515					520						525			
Ala	Tyr	Leu	His	Thr	Thr	Thr	Thr	Phe	Thr	Trp	Met	Cys	Ser	Pro	Phe	
		530					535				540					
Leu	Val	Thr	Leu	Ile	Thr	Leu	Trp	Val	Tyr	Val	Tyr	Val	Asp	Pro	Asn	
545					550					555					560	
Asn	Val	Leu	Asp	Ala	Glu	Lys	Ala	Phe	Val	Ser	Val	Ser	Leu	Phe	Asn	
				565					570						575	
Ile	Leu	Arg	Leu	Pro	Leu	Asn	Met	Leu	Pro	Gln	Leu	Ile	Ser	Asn	Leu	
			580					585						590		
Thr	Gln	Ala	Ser	Val	Ser	Leu	Lys	Arg	Ile	Gln	Gln	Phe	Leu	Ser	Gln	
		595					600						605			
Glu	Glu	Leu	Asp	Pro	Gln	Ser	Val	Glu	Arg	Lys	Thr	Ile	Ser	Pro	Gly	
		610					615					620				
Tyr	Ala	Ile	Thr	Ile	His	Ser	Gly	Thr	Phe	Thr	Trp	Ala	Gln	Asp	Leu	
625					630						635				640	
Pro	Pro	Thr	Leu	His	Ser	Leu	Asp	Ile	Gln	Val	Pro	Lys	Gly	Ala	Leu	
				645					650						655	
Val	Ala	Val	Val	Gly	Pro	Val	Gly	Cys	Gly	Lys	Ser	Ser	Leu	Val	Ser	
			660					665						670		
Ala	Leu	Leu	Gly	Glu	Met	Glu	Lys	Leu	Glu	Gly	Lys	Val	His	Met	Lys	
		675					680						685			
Gly	Ser	Val	Ala	Tyr	Val	Pro	Gln	Gln	Ala	Trp	Ile	Gln	Asn	Cys	Thr	
		690					695					700				
Leu	Gln	Glu	Asn	Val	Leu	Phe	Gly	Lys	Ala	Leu	Asn	Pro	Lys	Arg	Tyr	
705					710					715					720	
Gln	Gln	Thr	Leu	Glu	Ala	Cys	Ala	Leu	Leu	Ala	Asp	Leu	Glu	Met	Leu	
				725					730						735	

Pro Gly Gly Asp Gln Thr Glu Ile Gly Glu Lys Gly Ile Asn Leu Ser	740	745	750
Gly Gly Gln Arg Gln Arg Val Ser Leu Ala Arg Ala Val Tyr Ser Asp	755	760	765
Ala Asp Ile Phe Leu Leu Asp Asp Pro Leu Ser Ala Val Asp Ser His	770	775	780
Val Ala Lys His Ile Phe Asp His Val Ile Gly Pro Glu Gly Val Leu	785	790	795
Ala Gly Lys Thr Arg Val Leu Val Thr His Gly Ile Ser Phe Leu Pro	805	810	815
Gln Thr Asp Phe Ile Ile Val Leu Ala Asp Gly Gln Val Ser Glu Met	820	825	830
Gly Pro Tyr Pro Ala Leu Leu Gln Arg Asn Gly Ser Phe Ala Asn Phe	835	840	845
Leu Cys Asn Tyr Ala Pro Asp Glu Asp Gln Gly His Leu Glu Asp Ser	850	855	860
Trp Thr Ala Leu Glu Gly Ala Glu Asp Lys Glu Ala Leu Leu Ile Glu	865	870	875
Asp Thr Leu Ser Asn His Thr Asp Leu Thr Asp Asn Asp Pro Val Thr	885	890	895
Tyr Val Val Gln Lys Gln Phe Met Arg Gln Leu Ser Ala Leu Ser Ser	900	905	910
Asp Gly Glu Gly Gln Gly Arg Pro Val Pro Arg Arg His Leu Gly Pro	915	920	925
Ser Glu Lys Val Gln Val Thr Glu Ala Lys Ala Asp Gly Ala Leu Thr	930	935	940
Gln Glu Glu Lys Ala Ala Ile Gly Thr Val Glu Leu Ser Val Phe Trp	945	950	955
Asp Tyr Ala Lys Ala Val Gly Leu Cys Thr Thr Leu Ala Ile Cys Leu	965	970	975
Leu Tyr Val Gly Gln Ser Ala Ala Ala Ile Gly Ala Asn Val Trp Leu	980	985	990
Ser Ala Trp Thr Asn Asp Ala Met Ala Asp Ser Arg Gln Asn Asn Thr	995	1000	1005
Ser Leu Arg Leu Gly Val Tyr Ala Ala Leu Gly Ile Leu Gln Gly Phe	1010	1015	1020
Leu Val Met Leu Ala Ala Met Ala Met Ala Ala Gly Gly Ile Gln Ala	1025	1030	1035
			1040

Ala Arg Val Leu His Gln Ala Leu Leu His Asn Lys Ile Arg Ser Pro	1045	1050	1055
Gln Ser Phe Phe Asp Thr Thr Pro Ser Gly Arg Ile Leu Asn Cys Phe	1060	1065	1070
Ser Lys Asp Ile Tyr Val Val Asp Glu Val Leu Ala Pro Val Ile Leu	1075	1080	1085
Met Leu Leu Asn Ser Phe Phe Asn Ala Ile Ser Thr Leu Val Val Ile	1090	1095	1100
Met Ala Ser Thr Pro Leu Phe Thr Val Val Ile Leu Pro Leu Ala Val	1105	1110	1115
Leu Tyr Thr Leu Val Gln Arg Phe Tyr Ala Ala Thr Ser Arg Gln Leu	1125	1130	1135
Lys Arg Leu Glu Ser Val Ser Arg Ser Pro Ile Tyr Ser His Phe Ser	1140	1145	1150
Glu Thr Val Thr Gly Ala Ser Val Ile Arg Ala Tyr Asn Arg Ser Arg	1155	1160	1165
Asp Phe Glu Ile Ile Ser Asp Thr Lys Val Asp Ala Asn Gln Arg Ser	1170	1175	1180
Cys Tyr Pro Tyr Ile Ile Ser Asn Arg Trp Leu Ser Ile Gly Val Glu	1185	1190	1195
Phe Val Gly Asn Cys Val Val Leu Phe Ala Ala Leu Phe Ala Val Ile	1205	1210	1215
Gly Arg Ser Ser Leu Asn Pro Gly Leu Val Gly Leu Ser Val Ser Tyr	1220	1225	1230
Ser Leu Gln Val Thr Phe Ala Leu Asn Trp Met Ile Arg Met Met Ser	1235	1240	1245
Asp Leu Glu Ser Asn Ile Val Ala Val Glu Arg Val Lys Glu Tyr Ser	1250	1255	1260
Lys Thr Glu Thr Glu Ala Pro Trp Val Val Glu Gly Ser Arg Pro Pro	1265	1270	1275
Glu Gly Trp Pro Pro Arg Gly Glu Val Glu Phe Arg Asn Tyr Ser Val	1285	1290	1295
Arg Tyr Arg Pro Gly Leu Asp Leu Val Leu Arg Asp Leu Ser Leu His	1300	1305	1310
Val His Gly Gly Glu Lys Val Gly Ile Val Gly Arg Thr Gly Ala Gly	1315	1320	1325
Lys Ser Ser Met Thr Leu Cys Leu Phe Arg Ile Leu Glu Ala Ala Lys	1330	1335	1340

Gly Glu Ile Arg Ile Asp Gly Leu Asn Val Ala Asp Ile Gly Leu His
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 Asp Leu Arg Ser Gln Leu Thr Ile Ile Pro Gln Asp Pro Ile Leu Phe
 1365 1370 1375
 Ser Gly Thr Leu Arg Met Asn Leu Asp Pro Phe Gly Ser Tyr Ser Glu
 1380 1385 1390
 Glu Asp Ile Trp Trp Ala Leu Glu Leu Ser His Leu His Thr Phe Val
 1395 1400 1405
 Ser Ser Gln Pro Ala Gly Leu Asp Phe Gln Cys Ser Glu Gly Gly Glu
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 Leu Arg Lys Ser Arg Ile Leu Val Leu Asp Glu Ala Thr Ala Ala Ile
 1445 1450 1455
 Asp Leu Glu Thr Asp Asn Leu Ile Gln Ala Thr Ile Arg Thr Gln Phe
 1460 1465 1470
 Asp Thr Cys Thr Val Leu Thr Ile Ala His Arg Leu Asn Thr Ile Met
 1475 1480 1485
 Asp Tyr Thr Arg Val Leu Val Leu Asp Lys Gly Val Val Ala Glu Phe
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 Ala Arg Asp Ala Gly Leu Ala
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 Leu Pro Cys Tyr Leu Leu Tyr Leu Arg His His Cys Arg Gly Tyr Ile
 50 55 60
 Ile Leu Ser His Leu Ser Lys Leu Lys Met Val Leu Gly Val Leu Leu
 65 70 75 80

Trp Cys Val Ser Trp Ala Asp Leu Phe Tyr Ser Phe His Gly Leu Val
 85 90 95
 His Gly Arg Ala Pro Ala Pro Val Phe Phe Val Thr Pro Leu Val Val
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 Gly Val Thr Met Leu Leu Ala Thr Leu Leu Ile Gln Tyr Glu Arg Leu
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 Gln Gly Val Gln Ser Ser Gly Val Leu Ile Ile Phe Trp Phe Leu Cys
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 Val Val Cys Ala Ile Val Pro Phe Arg Ser Lys Ile Leu Leu Ala Lys
 145 150 155 160
 Ala Glu Gly Glu Ile Ser Asp Pro Phe Arg Phe Thr Thr Phe Tyr Ile
 165 170 175
 His Phe Ala Leu Val Leu Ser Ala Leu Ile Leu Ala Cys Phe Arg Glu
 180 185 190
 Lys Pro Pro Phe Phe Ser Ala Lys Asn Val Asp Pro Asn Pro Tyr Pro
 195 200 205
 Glu Thr Ser Ala Gly Phe Leu Ser Arg Leu Phe Phe Trp Trp Phe Thr
 210 215 220
 Lys Met Ala Ile Tyr Gly Tyr Arg His Pro Leu Glu Glu Lys Asp Leu
 225 230 235 240
 Trp Ser Leu Lys Glu Glu Asp Arg Ser Gln Met Val Val Gln Gln Leu
 245 250 255
 Leu Glu Ala Trp Arg Lys Gln Glu Lys Gln Thr Ala Arg His Lys Ala
 260 265 270
 Ser Ala Ala Pro Gly Lys Asn Ala Ser Gly Glu Asp Glu Val Leu Leu
 275 280 285
 Gly Ala Arg Pro Arg Pro Arg Lys Pro Ser Phe Leu Lys Ala Leu Leu
 290 295 300
 Ala Thr Phe Gly Ser Ser Phe Leu Ile Ser Ala Cys Phe Lys Leu Ile
 305 310 315 320
 Gln Asp Leu Leu Ser Phe Ile Asn Pro Gln Leu Leu Ser Ile Leu Ile
 325 330 335
 Arg Phe Ile Ser Asn Pro Met Ala Pro Ser Trp Trp Gly Phe Leu Val
 340 345 350
 Ala Gly Leu Met Phe Leu Cys Ser Met Met Gln Ser Leu Ile Leu Gln
 355 360 365
 His Tyr Tyr His Tyr Ile Phe Val Thr Gly Val Lys Phe Arg Thr Gly
 370 375 380

Ile Met Gly Val	Ile Tyr Arg Lys Ala Leu Val	Ile Thr Asn Ser Val
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Lys Arg Ala Ser	Thr Val Gly Glu Ile Val Asn Leu Met Ser Val Asp	
	405	410 415
Ala Gln Arg Phe Met Asp Leu Ala Pro Phe Leu Asn Leu Leu Trp Ser		
	420	425 430
Ala Pro Leu Gln Ile Ile Leu Ala Ile Tyr Phe Leu Trp Gln Asn Leu		
	435	440 445
Gly Pro Ser Val Leu Ala Gly Val Ala Phe Met Val Leu Leu Ile Pro		
	450	455 460
Leu Asn Gly Ala Val Ala Val Lys Met Arg Ala Phe Gln Val Lys Gln		
	465	470 475 480
Met Lys Leu Lys Asp Ser Arg Ile Lys Leu Met Ser Glu Ile Leu Asn		
	485	490 495
Gly Ile Lys Val Leu Lys Leu Tyr Ala Trp Glu Pro Ser Phe Leu Lys		
	500	505 510
Gln Val Glu Gly Ile Arg Gln Gly Glu Leu Gln Leu Leu Arg Thr Ala		
	515	520 525
Ala Tyr Leu His Thr Thr Thr Thr Phe Thr Trp Met Cys Ser Pro Phe		
	530	535 540
Leu Val Thr Leu Ile Thr Leu Trp Val Tyr Val Tyr Val Asp Pro Asn		
	545	550 555 560
Asn Val Leu Asp Ala Glu Lys Ala Phe Val Ser Val Ser Leu Phe Asn		
	565	570 575
Ile Leu Arg Leu Pro Leu Asn Met Leu Pro Gln Leu Ile Ser Asn Leu		
	580	585 590
Thr Gln Ala Ser Val Ser Leu Lys Arg Ile Gln Gln Phe Leu Ser Gln		
	595	600 605
Glu Glu Leu Asp Pro Gln Ser Val Glu Arg Lys Thr Ile Ser Pro Gly		
	610	615 620
Tyr Ala Ile Thr Ile His Ser Gly Thr Phe Thr Trp Ala Gln Asp Leu		
	625	630 635 640
Pro Pro Thr Leu His Ser Leu Asp Ile Gln Val Pro Lys Gly Ala Leu		
	645	650 655
Val Ala Val Val Gly Pro Val Gly Cys Gly Lys Ser Ser Leu Val Ser		
	660	665 670
Ala Leu Leu Gly Glu Met Glu Lys Leu Glu Gly Lys Val His Met Lys		
	675	680 685

Gly	Ser	Val	Ala	Tyr	Val	Pro	Gln	Gln	Ala	Trp	Ile	Gln	Asn	Cys	Thr	690	695	700	
Leu	Gln	Glu	Asn	Val	Leu	Phe	Gly	Lys	Ala	Leu	Asn	Pro	Lys	Arg	Tyr	705	710	715	720
Gln	Gln	Thr	Leu	Glu	Ala	Cys	Ala	Leu	Leu	Ala	Asp	Leu	Glu	Met	Leu	725	730	735	
Pro	Gly	Gly	Asp	Gln	Thr	Glu	Ile	Gly	Glu	Lys	Gly	Ile	Asn	Leu	Ser	740	745	750	
Gly	Gly	Gln	Arg	Gln	Arg	Val	Ser	Leu	Ala	Arg	Ala	Val	Tyr	Ser	Asp	755	760	765	
Ala	Asp	Ile	Phe	Leu	Leu	Asp	Asp	Pro	Leu	Ser	Ala	Val	Asp	Ser	His	770	775	780	
Val	Ala	Lys	His	Ile	Phe	Asp	His	Val	Ile	Gly	Pro	Glu	Gly	Val	Leu	785	790	795	800
Ala	Gly	Lys	Thr	Arg	Val	Leu	Val	Thr	His	Gly	Ile	Ser	Phe	Leu	Pro	805	810	815	
Gln	Thr	Asp	Phe	Ile	Ile	Val	Leu	Ala	Asp	Gly	Gln	Val	Ser	Glu	Met	820	825	830	
Gly	Pro	Tyr	Pro	Ala	Leu	Leu	Gln	Arg	Asn	Gly	Ser	Phe	Ala	Asn	Phe	835	840	845	
Leu	Cys	Asn	Tyr	Ala	Pro	Asp	Glu	Asp	Gln	Gly	His	Leu	Glu	Asp	Ser	850	855	860	
Trp	Thr	Ala	Leu	Glu	Gly	Ala	Glu	Asp	Lys	Glu	Ala	Leu	Leu	Ile	Glu	865	870	875	880
Asp	Thr	Leu	Ser	Asn	His	Thr	Asp	Leu	Thr	Asp	Asn	Asp	Pro	Val	Thr	885	890	895	
Tyr	Val	Val	Gln	Lys	Gln	Phe	Met	Arg	Gln	Leu	Ser	Ala	Leu	Ser	Ser	900	905	910	
Asp	Gly	Glu	Gly	Gln	Gly	Arg	Pro	Val	Pro	Arg	Arg	His	Leu	Gly	Pro	915	920	925	
Ser	Glu	Lys	Val	Gln	Val	Thr	Glu	Ala	Lys	Ala	Asp	Gly	Ala	Leu	Thr	930	935	940	
Gln	Glu	Glu	Lys	Ala	Ala	Ile	Gly	Thr	Val	Glu	Leu	Ser	Val	Phe	Trp	945	950	955	960
Asp	Tyr	Ala	Lys	Ala	Val	Gly	Leu	Cys	Thr	Thr	Leu	Ala	Ile	Cys	Leu	965	970	975	
Leu	Tyr	Val	Gly	Gln	Ser	Ala	Ala	Ala	Ile	Gly	Ala	Asn	Val	Trp	Leu	980	985	990	

Ser Ala Trp Thr Asn Asp Ala Met Ala Asp Ser Arg Gln Asn Asn Thr
 995 1000 1005
 Ser Leu Arg Leu Gly Val Tyr Ala Ala Leu Gly Ile Leu Gln Gly Phe
 1010 1015 1020
 Leu Val Met Leu Ala Ala Met Ala Met Ala Ala Gly Gly Ile Gln Ala
 1025 1030 1035 1040
 Ala Arg Val Leu His Gln Ala Leu Leu His Asn Lys Ile Arg Ser Pro
 1045 1050 1055
 Gln Ser Phe Phe Asp Thr Thr Pro Ser Gly Arg Ile Leu Asn Cys Phe
 1060 1065 1070
 Ser Lys Asp Ile Tyr Val Val Asp Glu Val Leu Ala Pro Val Ile Leu
 1075 1080 1085
 Met Leu Leu Asn Ser Phe Phe Asn Ala Ile Ser Thr Leu Val Val Ile
 1090 1095 1100
 Met Ala Ser Thr Pro Leu Phe Thr Val Val Ile Leu Pro Leu Ala Val
 1105 1110 1115 1120
 Leu Tyr Thr Leu Val Gln Arg Phe Tyr Ala Ala Thr Ser Arg Gln Leu
 1125 1130 1135
 Lys Arg Leu Glu Ser Val Ser Arg Ser Pro Ile Tyr Ser His Phe Ser
 1140 1145 1150
 Glu Thr Val Thr Gly Ala Ser Val Ile Arg Ala Tyr Asn Arg Ser Arg
 1155 1160 1165
 Asp Phe Glu Ile Ile Ser Asp Thr Lys Val Asp Ala Asn Gln Arg Ser
 1170 1175 1180
 Cys Tyr Pro Tyr Ile Ile Ser Asn Arg Trp Leu Ser Ile Gly Val Glu
 1185 1190 1195 1200
 Phe Val Gly Asn Cys Val Val Leu Phe Ala Ala Leu Phe Ala Val Ile
 1205 1210 1215
 Gly Arg Ser Ser Leu Asn Pro Gly Leu Val Gly Leu Ser Val Ser Tyr
 1220 1225 1230
 Ser Leu Gln Val Thr Phe Ala Leu Asn Trp Met Ile Arg Met Met Ser
 1235 1240 1245
 Asp Leu Glu Ser Asn Ile Val Ala Val Glu Arg Val Lys Glu Tyr Ser
 1250 1255 1260
 Lys Thr Glu Thr Glu Ala Pro Trp Val Val Glu Gly Ser Arg Pro Pro
 1265 1270 1275 1280
 Glu Gly Trp Pro Pro Arg Gly Glu Val Glu Phe Arg Asn Tyr Ser Val
 1285 1290 1295

Arg Tyr Arg Pro Gly Leu Asp Leu Val Leu Arg Asp Leu Ser Leu His
 1300 1305 1310
 Val His Gly Gly Glu Lys Val Gly Ile Val Gly Arg Thr Gly Ala Gly
 1315 1320 1325
 Lys Ser Ser Met Thr Leu Cys Leu Phe Arg Ile Leu Glu Ala Ala Lys
 1330 1335 1340
 Gly Glu Ile Arg Ile Asp Gly Leu Asn Val Ala Asp Ile Gly Leu His
 1345 1350 1355 1360
 Asp Leu Arg Ser Gln Leu Thr Ile Ile Pro Gln Asp Pro Ile Leu Phe
 1365 1370 1375
 Ser Gly Thr Leu Arg Met Asn Leu Asp Pro Phe Gly Ser Tyr Ser Glu
 1380 1385 1390
 Glu Asp Ile Trp Trp Ala Leu Glu Leu Ser His Leu His Thr Phe Val
 1395 1400 1405
 Ser Ser Gln Pro Ala Gly Leu Asp Phe Gln Cys Ser Glu Gly Gly Glu
 1410 1415 1420
 Asn Leu Ser Val Gly Gln Arg Gln Leu Val Cys Leu Ala Arg Ala Leu
 1425 1430 1435 1440
 Leu Arg Lys Ser Arg Ile Leu Val Leu Asp Glu Ala Thr Ala Ala Ile
 1445 1450 1455
 Asp Leu Glu Thr Asp Asn Leu Ile Gln Ala Thr Ile Arg Thr Gln Phe
 1460 1465 1470
 Asp Thr Cys Thr Val Leu Thr Ile Ala His Arg Leu Asn Thr Ile Met
 1475 1480 1485
 Asp Tyr Thr Arg Val Leu Val Leu Asp Lys Gly Val Val Ala Glu Phe
 1490 1495 1500
 Asp Ser Pro Ala Asn Leu Ile Ala Ala Arg Gly Ile Phe Tyr Gly Met
 1505 1510 1515 1520
 Ala Arg Asp Ala Gly Leu Ala
 1525

<210> 85
 <211> 1522
 <212> PRT
 <213> Rattus norvegicus

<400> 85
 Met Asp Arg Leu Cys Gly Ser Gly Glu Leu Gly Ser Lys Phe Trp Asp
 1 5 10 15

Ser Asn Leu Thr Val Tyr Thr Asn Thr Pro Asp Leu Thr Pro Cys Phe

20

25

30

Gln Asn Ser Leu Leu Ala Trp Val Pro Cys Ile Tyr Leu Trp Ala Ala
 35 40 45
 Leu Pro Cys Tyr Leu Phe Tyr Leu Arg His His Arg Leu Gly Tyr Ile
 50 55 60
 Val Leu Ser Cys Leu Ser Arg Leu Lys Thr Ala Leu Gly Val Leu Leu
 65 70 75 80
 Trp Cys Ile Ser Trp Val Asp Leu Phe Tyr Ser Phe His Gly Leu Val
 85 90 95
 His Gly Ser Ser Pro Ala Pro Val Phe Phe Ile Thr Pro Leu Leu Val
 100 105 110
 Gly Ile Thr Met Leu Leu Ala Thr Leu Leu Ile Gln Tyr Glu Arg Leu
 115 120 125
 Arg Gly Val Arg Ser Ser Gly Val Leu Ile Ile Phe Trp Leu Leu Cys
 130 135 140
 Val Ile Cys Ala Ile Ile Pro Phe Arg Ser Lys Ile Leu Leu Ala Leu
 145 150 155 160
 Ala Glu Gly Lys Ile Leu Asp Pro Phe Arg Phe Thr Thr Phe Tyr Ile
 165 170 175
 Tyr Phe Ala Leu Val Leu Cys Ala Phe Ile Leu Ser Cys Phe Gln Glu
 180 185 190
 Lys Pro Pro Leu Phe Ser Pro Glu Asn Leu Asp Thr Asn Pro Cys Pro
 195 200 205
 Glu Ala Ser Ala Gly Phe Phe Ser Arg Leu Ser Phe Trp Trp Phe Thr
 210 215 220
 Lys Leu Ala Ile Leu Gly Tyr Arg Arg Pro Leu Glu Asp Ser Asp Leu
 225 230 235 240
 Trp Ser Leu Ser Glu Glu Asp Cys Ser His Lys Val Val Gln Arg Leu
 245 250 255
 Leu Glu Ala Trp Gln Lys Gln Gln Thr Gln Ala Ser Gly Pro Gln Thr
 260 265 270
 Ala Ala Leu Glu Pro Lys Ile Ala Gly Glu Asp Glu Val Leu Leu Lys
 275 280 285
 Ala Arg Pro Lys Thr Lys Lys Pro Ser Phe Leu Arg Ala Leu Val Arg
 290 295 300
 Thr Phe Thr Ser Ser Leu Leu Met Gly Ala Cys Phe Lys Leu Ile Gln
 305 310 315 320
 Asp Leu Ser Pro Ser Ser Thr His Ser Cys Ser Ala Ser Ser Ser Gly

325										330					335				
Leu	Phe	Arg	Pro	His	Gly	Pro	Tyr	Trp	Trp	Gly	Phe	Leu	Leu	Ala	Gly				
			340					345					350						
Leu	Met	Phe	Val	Ser	Ser	Thr	Met	Gln	Thr	Leu	Ile	Leu	His	Gln	His				
		355					360					365							
Tyr	His	Cys	Ile	Phe	Val	Met	Ala	Leu	Arg	Ile	Arg	Thr	Ala	Ile	Ile				
	370					375					380								
Gly	Val	Ile	Tyr	Arg	Lys	Ala	Leu	Thr	Ile	Thr	Asn	Ser	Val	Lys	Arg				
385					390					395					400				
Glu	Tyr	Thr	Val	Gly	Glu	Met	Val	Asn	Leu	Met	Ser	Val	Asp	Ala	Gln				
				405					410					415					
Arg	Phe	Met	Asp	Val	Ser	Pro	Phe	Ile	Asn	Leu	Leu	Trp	Ser	Ala	Pro				
			420					425						430					
Leu	Gln	Val	Ile	Leu	Ala	Ile	Tyr	Phe	Leu	Trp	Gln	Ile	Leu	Gly	Pro				
		435					440					445							
Ser	Ala	Leu	Ala	Gly	Val	Ala	Val	Ile	Val	Leu	Leu	Ile	Pro	Leu	Asn				
	450					455					460								
Gly	Ala	Val	Ser	Met	Lys	Met	Lys	Thr	Tyr	Gln	Val	Gln	Gln	Met	Lys				
465					470					475					480				
Phe	Lys	Asp	Ser	Arg	Ile	Lys	Leu	Met	Ser	Glu	Ile	Leu	Asn	Gly	Ile				
				485					490					495					
Lys	Val	Leu	Lys	Leu	Tyr	Ala	Trp	Glu	Pro	Thr	Phe	Leu	Glu	Gln	Val				
			500					505					510						
Glu	Gly	Ile	Arg	Gln	Gly	Glu	Leu	Gln	Leu	Leu	Arg	Lys	Gly	Ala	Tyr				
		515					520					525							
Leu	Gln	Ala	Ile	Ser	Thr	Phe	Ile	Trp	Val	Cys	Thr	Pro	Phe	Met	Val				
		530				535					540								
Thr	Leu	Ile	Thr	Leu	Gly	Val	Tyr	Val	Cys	Val	Asp	Lys	Asn	Asn	Val				
545					550					555					560				
Leu	Asp	Ala	Glu	Lys	Ala	Phe	Val	Ser	Leu	Ser	Leu	Phe	Asn	Ile	Leu				
				565					570					575					
Lys	Ile	Pro	Leu	Asn	Leu	Leu	Pro	Gln	Leu	Ile	Ser	Gly	Met	Thr	Gln				
			580					585					590						
Thr	Ser	Val	Ser	Leu	Lys	Arg	Ile	Gln	Asp	Phe	Leu	Asn	Gln	Asp	Glu				
		595					600					605							
Leu	Asp	Pro	Gln	Cys	Val	Glu	Arg	Lys	Thr	Ile	Ser	Pro	Gly	Arg	Ala				
	610					615					620								
Ile	Thr	Ile	His	Asn	Gly	Thr	Phe	Ser	Trp	Ser	Lys	Asp	Leu	Pro	Pro				

625		630		635		640
Thr Leu His Ser	Ile Asn Ile Gln Ile	Pro Lys Gly Ala Leu Val Ala				
	645		650			655
Val Val Gly Pro	Val Gly Cys Gly Lys Ser Ser Leu Val Ser Ala Leu					
	660		665			670
Leu Gly Glu Met	Glu Lys Leu Glu Gly Ala Val Ser Val Lys Gly Ser					
	675		680			685
Val Ala Tyr Val	Pro Gln Gln Ala Trp Ile Gln Asn Cys Thr Leu Gln					
	690		695			700
Glu Asn Val Leu Phe	Gly Gln Pro Met Asn Pro Lys Arg Tyr Gln Gln					
	705		710		715	720
Ala Leu Glu Thr	Cys Ala Leu Leu Ala Asp Leu Asp Val Leu Pro Gly					
	725		730			735
Gly Asp Gln Thr	Glu Ile Gly Glu Lys Gly Ile Asn Leu Ser Gly Gly					
	740		745			750
Gln Arg Gln Arg	Val Ser Leu Ala Arg Ala Val Tyr Ser Asp Ala Asn					
	755		760			765
Ile Phe Leu Leu	Asp Asp Pro Leu Ser Ala Val Asp Ser His Val Ala					
	770		775			780
Lys His Ile Phe	Asp Gln Val Ile Gly Pro Glu Gly Val Leu Ala Gly					
	785		790		795	800
Lys Thr Arg Val	Leu Val Thr His Gly Ile Ser Phe Leu Pro Gln Thr					
	805		810			815
Asp Phe Ile Ile	Val Leu Ala Asp Gly Gln Ile Thr Glu Met Gly His					
	820		825			830
Tyr Ser Glu Leu	Leu Gln His Asp Gly Ser Phe Ala Asn Phe Leu Arg					
	835		840			845
Asn Tyr Ala Pro	Asp Glu Asn Gln Glu Ala Asn Glu Gly Val Leu Gln					
	850		855			860
His Ala Asn Glu	Glu Val Leu Leu Leu Glu Asp Thr Leu Ser Thr His					
	865		870		875	880
Thr Asp Leu Thr	Asp Thr Glu Pro Ala Ile Tyr Glu Val Arg Lys Gln					
	885		890			895
Phe Met Arg Glu	Met Ser Ser Leu Ser Ser Glu Gly Glu Gly Gln Asn					
	900		905			910
Arg Pro Val Leu	Lys Arg Tyr Thr Ser Ser Leu Glu Lys Glu Val Pro					
	915		920			925
Ala Thr Gln Thr	Lys Glu Thr Gly Ala Leu Ile Lys Glu Glu Ile Ala					

1235	1240	1245
Ile Ile Ala Val Glu Arg Val Lys Glu Tyr Ser Lys Thr Glu Thr Glu		
1250	1255	1260
Ala Pro Trp Val Leu Glu Ser Asn Arg Ala Pro Glu Gly Trp Pro Arg		
1265	1270	1275 1280
Ser Gly Val Val Glu Phe Arg Asn Tyr Ser Val Arg Tyr Arg Pro Gly		
1285	1290	1295
Leu Glu Leu Val Leu Lys Asn Leu Thr Leu His Val Gln Gly Gly Glu		
1300	1305	1310
Lys Val Gly Ile Val Gly Arg Thr Gly Ala Gly Lys Ser Ser Met Thr		
1315	1320	1325
Leu Cys Leu Phe Arg Ile Leu Glu Ala Ala Glu Gly Glu Ile Phe Ile		
1330	1335	1340
Asp Gly Leu Asn Val Ala His Ile Gly Leu His Asp Leu Arg Ser Gln		
1345	1350	1355 1360
Leu Thr Ile Ile Pro Gln Asp Pro Ile Leu Phe Ser Gly Thr Leu Arg		
1365	1370	1375
Met Asn Leu Asp Pro Phe Gly Arg Tyr Ser Asp Glu Asp Ile Trp Arg		
1380	1385	1390
Thr Leu Glu Leu Ser His Leu Ser Ala Phe Val Ser Ser Gln Pro Thr		
1395	1400	1405
Gly Leu Asp Phe Gln Cys Ser Glu Gly Gly Asp Asn Leu Ser Val Gly		
1410	1415	1420
Gln Arg Gln Leu Val Cys Leu Ala Arg Ala Leu Leu Arg Lys Ser Arg		
1425	1430	1435 1440
Val Leu Val Leu Asp Glu Ala Thr Ala Ala Ile Asp Leu Glu Thr Asp		
1445	1450	1455
Asp Leu Ile Gln Gly Thr Ile Arg Thr Gln Phe Glu Asp Cys Thr Val		
1460	1465	1470
Leu Thr Ile Ala His Arg Leu Asn Thr Ile Met Asp Tyr Asn Arg Val		
1475	1480	1485
Leu Val Leu Asp Lys Gly Val Val Ala Glu Phe Asp Ser Pro Val Asn		
1490	1495	1500
Leu Ile Ala Ala Gly Gly Ile Phe Tyr Gly Met Ala Lys Asp Ala Gly		
1505	1510	1515 1520
Leu Ala		

<210> 86
 <211> 1531
 <212> PRT
 <213> Homo sapiens

<400> 86

Met	Ala	Leu	Arg	Gly	Phe	Cys	Ser	Ala	Asp	Gly	Ser	Asp	Pro	Leu	Trp
1				5					10					15	
Asp	Trp	Asn	Val	Thr	Trp	Asn	Thr	Ser	Asn	Pro	Asp	Phe	Thr	Lys	Cys
		20					25						30		
Phe	Gln	Asn	Thr	Val	Leu	Val	Trp	Val	Pro	Cys	Phe	Tyr	Leu	Trp	Ala
		35					40					45			
Cys	Phe	Pro	Phe	Tyr	Phe	Leu	Tyr	Leu	Ser	Arg	His	Asp	Arg	Gly	Tyr
	50					55					60				
Ile	Gln	Met	Thr	Pro	Leu	Asn	Lys	Thr	Lys	Thr	Ala	Leu	Gly	Phe	Leu
65					70					75					80
Leu	Trp	Ile	Val	Cys	Trp	Ala	Asp	Leu	Phe	Tyr	Ser	Phe	Trp	Glu	Arg
			85						90					95	
Ser	Arg	Gly	Ile	Phe	Leu	Ala	Pro	Val	Phe	Leu	Val	Ser	Pro	Thr	Leu
		100						105					110		
Leu	Gly	Ile	Thr	Thr	Leu	Leu	Ala	Thr	Phe	Leu	Ile	Gln	Leu	Glu	Arg
	115						120					125			
Arg	Lys	Gly	Val	Gln	Ser	Ser	Gly	Ile	Met	Leu	Thr	Phe	Trp	Leu	Val
	130					135						140			
Ala	Leu	Val	Cys	Ala	Leu	Ala	Ile	Leu	Arg	Ser	Lys	Ile	Met	Thr	Ala
145					150					155					160
Leu	Lys	Glu	Asp	Ala	Gln	Val	Asp	Leu	Phe	Arg	Asp	Ile	Thr	Phe	Tyr
			165						170					175	
Val	Tyr	Phe	Ser	Leu	Leu	Leu	Ile	Gln	Leu	Val	Leu	Ser	Cys	Phe	Ser
			180					185					190		
Asp	Arg	Ser	Pro	Leu	Phe	Ser	Glu	Thr	Ile	His	Asp	Pro	Asn	Pro	Cys
		195					200					205			
Pro	Glu	Ser	Ser	Ala	Ser	Phe	Leu	Ser	Arg	Ile	Thr	Phe	Trp	Trp	Ile
	210					215					220				
Thr	Gly	Leu	Ile	Val	Arg	Gly	Tyr	Arg	Gln	Pro	Leu	Glu	Gly	Ser	Asp
225					230					235					240
Leu	Trp	Ser	Leu	Asn	Lys	Glu	Asp	Thr	Ser	Glu	Gln	Val	Val	Pro	Val
			245						250					255	
Leu	Val	Lys	Asn	Trp	Lys	Lys	Glu	Cys	Ala	Lys	Thr	Arg	Lys	Gln	Pro
			260					265						270	

Val Lys Val Val Tyr Ser Ser Lys Asp Pro Ala Gln Pro Lys Glu Ser
 275 280 285
 Ser Lys Val Asp Ala Asn Glu Glu Val Glu Ala Leu Ile Val Lys Ser
 290 295 300
 Pro Gln Lys Glu Trp Asn Pro Ser Leu Phe Lys Val Leu Tyr Lys Thr
 305 310 315 320
 Phe Gly Pro Tyr Phe Leu Met Ser Phe Phe Phe Lys Ala Ile His Asp
 325 330 335
 Leu Met Met Phe Ser Gly Pro Gln Ile Leu Lys Leu Leu Ile Lys Phe
 340 345 350
 Val Asn Asp Thr Lys Ala Pro Asp Trp Gln Gly Tyr Phe Tyr Thr Val
 355 360 365
 Leu Leu Phe Val Thr Ala Cys Leu Gln Thr Leu Val Leu His Gln Tyr
 370 375 380
 Phe His Ile Cys Phe Val Ser Gly Met Arg Ile Lys Thr Ala Val Ile
 385 390 395 400
 Gly Ala Val Tyr Arg Lys Ala Leu Val Ile Thr Asn Ser Ala Arg Lys
 405 410 415
 Ser Ser Thr Val Gly Glu Ile Val Asn Leu Met Ser Val Asp Ala Gln
 420 425 430
 Arg Phe Met Asp Leu Ala Thr Tyr Ile Asn Met Ile Trp Ser Ala Pro
 435 440 445
 Leu Gln Val Ile Leu Ala Leu Tyr Leu Leu Trp Leu Asn Leu Gly Pro
 450 455 460
 Ser Val Leu Ala Gly Val Ala Val Met Val Leu Met Val Pro Val Asn
 465 470 475 480
 Ala Val Met Ala Met Lys Thr Lys Thr Tyr Gln Val Ala His Met Lys
 485 490 495
 Ser Lys Asp Asn Arg Ile Lys Leu Met Asn Glu Ile Leu Asn Gly Ile
 500 505 510
 Lys Val Leu Lys Leu Tyr Ala Trp Glu Leu Ala Phe Lys Asp Lys Val
 515 520 525
 Leu Ala Ile Arg Gln Glu Glu Leu Lys Val Leu Lys Lys Ser Ala Tyr
 530 535 540
 Leu Ser Ala Val Gly Thr Phe Thr Trp Val Cys Thr Pro Phe Leu Val
 545 550 555 560
 Ala Leu Cys Thr Phe Ala Val Tyr Val Thr Ile Asp Glu Asn Asn Ile
 565 570 575

Leu	Asp	Ala	Gln	Thr	Ala	Phe	Val	Ser	Leu	Ala	Leu	Phe	Asn	Ile	Leu	
			580					585					590			
Arg	Phe	Pro	Leu	Asn	Ile	Leu	Pro	Met	Val	Ile	Ser	Ser	Ile	Val	Gln	
		595					600					605				
Ala	Ser	Val	Ser	Leu	Lys	Arg	Leu	Arg	Ile	Phe	Leu	Ser	His	Glu	Glu	
	610					615					620					
Leu	Glu	Pro	Asp	Ser	Ile	Glu	Arg	Arg	Pro	Val	Lys	Asp	Gly	Gly	Gly	
625					630					635					640	
Thr	Asn	Ser	Ile	Thr	Val	Arg	Asn	Ala	Thr	Phe	Thr	Trp	Ala	Arg	Ser	
			645						650					655		
Asp	Pro	Pro	Thr	Leu	Asn	Gly	Ile	Thr	Phe	Ser	Ile	Pro	Glu	Gly	Ala	
			660					665					670			
Leu	Val	Ala	Val	Val	Gly	Gln	Val	Gly	Cys	Gly	Lys	Ser	Ser	Leu	Leu	
	675						680					685				
Ser	Ala	Leu	Leu	Ala	Glu	Met	Asp	Lys	Val	Glu	Gly	His	Val	Ala	Ile	
	690					695					700					
Lys	Gly	Ser	Val	Ala	Tyr	Val	Pro	Gln	Gln	Ala	Trp	Ile	Gln	Asn	Asp	
705					710					715					720	
Ser	Leu	Arg	Glu	Asn	Ile	Leu	Phe	Gly	Cys	Gln	Leu	Glu	Glu	Pro	Tyr	
			725					730						735		
Tyr	Arg	Ser	Val	Ile	Gln	Ala	Cys	Ala	Leu	Leu	Pro	Asp	Leu	Glu	Ile	
			740				745						750			
Leu	Pro	Ser	Gly	Asp	Arg	Thr	Glu	Ile	Gly	Glu	Lys	Gly	Val	Asn	Leu	
	755						760					765				
Ser	Gly	Gly	Gln	Lys	Gln	Arg	Val	Ser	Leu	Ala	Arg	Ala	Val	Tyr	Ser	
	770					775					780					
Asn	Ala	Asp	Ile	Tyr	Leu	Phe	Asp	Asp	Pro	Leu	Ser	Ala	Val	Asp	Ala	
785					790					795					800	
His	Val	Gly	Lys	His	Ile	Phe	Glu	Asn	Val	Ile	Gly	Pro	Lys	Gly	Met	
			805						810					815		
Leu	Lys	Asn	Lys	Thr	Arg	Ile	Leu	Val	Thr	His	Ser	Met	Ser	Tyr	Leu	
		820						825					830			
Pro	Gln	Val	Asp	Val	Ile	Ile	Val	Met	Ser	Gly	Gly	Lys	Ile	Ser	Glu	
	835						840					845				
Met	Gly	Ser	Tyr	Gln	Glu	Leu	Leu	Ala	Arg	Asp	Gly	Ala	Phe	Ala	Glu	
	850					855					860					
Phe	Leu	Arg	Thr	Tyr	Ala	Ser	Thr	Glu	Gln	Glu	Gln	Asp	Ala	Glu	Glu	
865					870					875				880		

Asn	Gly	Val	Thr	Gly	Val	Ser	Gly	Pro	Gly	Lys	Glu	Ala	Lys	Gln	Met	885	890	895
Glu	Asn	Gly	Met	Leu	Val	Thr	Asp	Ser	Ala	Gly	Lys	Gln	Leu	Gln	Arg	900	905	910
Gln	Leu	Ser	Ser	Ser	Ser	Ser	Tyr	Ser	Gly	Asp	Ile	Ser	Arg	His	His	915	920	925
Asn	Ser	Thr	Ala	Glu	Leu	Gln	Lys	Ala	Glu	Ala	Lys	Lys	Glu	Glu	Thr	930	935	940
Trp	Lys	Leu	Met	Glu	Ala	Asp	Lys	Ala	Gln	Thr	Gly	Gln	Val	Lys	Leu	945	950	955
Ser	Val	Tyr	Trp	Asp	Tyr	Met	Lys	Ala	Ile	Gly	Leu	Phe	Ile	Ser	Phe	965	970	975
Leu	Ser	Ile	Phe	Leu	Phe	Met	Cys	Asn	His	Val	Ser	Ala	Leu	Ala	Ser	980	985	990
Asn	Tyr	Trp	Leu	Ser	Leu	Trp	Thr	Asp	Asp	Pro	Ile	Val	Asn	Gly	Thr	995	1000	1005
Gln	Glu	His	Thr	Lys	Val	Arg	Leu	Ser	Val	Tyr	Gly	Ala	Leu	Gly	Ile	1010	1015	1020
Ser	Gln	Gly	Ile	Ala	Val	Phe	Gly	Tyr	Ser	Met	Ala	Val	Ser	Ile	Gly	1025	1030	1035
Gly	Ile	Leu	Ala	Ser	Arg	Cys	Leu	His	Val	Asp	Leu	Leu	His	Ser	Ile	1045	1050	1055
Leu	Arg	Ser	Pro	Met	Ser	Phe	Phe	Glu	Arg	Thr	Pro	Ser	Gly	Asn	Leu	1060	1065	1070
Val	Asn	Arg	Phe	Ser	Lys	Glu	Leu	Asp	Thr	Val	Asp	Ser	Met	Ile	Pro	1075	1080	1085
Glu	Val	Ile	Lys	Met	Phe	Met	Gly	Ser	Leu	Phe	Asn	Val	Ile	Gly	Ala	1090	1095	1100
Cys	Ile	Val	Ile	Leu	Leu	Ala	Thr	Pro	Ile	Ala	Ala	Ile	Ile	Ile	Pro	1105	1110	1115
Pro	Leu	Gly	Leu	Ile	Tyr	Phe	Phe	Val	Gln	Arg	Phe	Tyr	Val	Ala	Ser	1125	1130	1135
Ser	Arg	Gln	Leu	Lys	Arg	Leu	Glu	Ser	Val	Ser	Arg	Ser	Pro	Val	Tyr	1140	1145	1150
Ser	His	Phe	Asn	Glu	Thr	Leu	Leu	Gly	Val	Ser	Val	Ile	Arg	Ala	Phe	1155	1160	1165
Glu	Glu	Gln	Glu	Arg	Phe	Ile	His	Gln	Ser	Asp	Leu	Lys	Val	Asp	Glu	1170	1175	1180

Asn Gln Lys Ala Tyr Tyr Pro Ser Ile Val Ala Asn Arg Trp Leu Ala
 1185 1190 1195 1200
 Val Arg Leu Glu Cys Val Gly Asn Cys Ile Val Leu Phe Ala Ala Leu
 1205 1210 1215
 Phe Ala Val Ile Ser Arg His Ser Leu Ser Ala Gly Leu Val Gly Leu
 1220 1225 1230
 Ser Val Ser Tyr Ser Leu Gln Val Thr Thr Tyr Leu Asn Trp Leu Val
 1235 1240 1245
 Arg Met Ser Ser Glu Met Glu Thr Asn Ile Val Ala Val Glu Arg Leu
 1250 1255 1260
 Lys Glu Tyr Ser Glu Thr Glu Lys Glu Ala Pro Trp Gln Ile Gln Glu
 1265 1270 1275 1280
 Thr Ala Pro Pro Ser Ser Trp Pro Gln Val Gly Arg Val Glu Phe Arg
 1285 1290 1295
 Asn Tyr Cys Leu Arg Tyr Arg Glu Asp Leu Asp Phe Val Leu Arg His
 1300 1305 1310
 Ile Asn Val Thr Ile Asn Gly Gly Glu Lys Val Gly Ile Val Gly Arg
 1315 1320 1325
 Thr Gly Ala Gly Lys Ser Ser Leu Thr Leu Gly Leu Phe Arg Ile Asn
 1330 1335 1340
 Glu Ser Ala Glu Gly Glu Ile Ile Ile Asp Gly Ile Asn Ile Ala Lys
 1345 1350 1355 1360
 Ile Gly Leu His Asp Leu Arg Phe Lys Ile Thr Ile Ile Pro Gln Asp
 1365 1370 1375
 Pro Val Leu Phe Ser Gly Ser Leu Arg Met Asn Leu Asp Pro Phe Ser
 1380 1385 1390
 Gln Tyr Ser Asp Glu Glu Val Trp Thr Ser Leu Glu Leu Ala His Leu
 1395 1400 1405
 Lys Asp Phe Val Ser Ala Leu Pro Asp Lys Leu Asp His Glu Cys Ala
 1410 1415 1420
 Glu Gly Gly Glu Asn Leu Ser Val Gly Gln Arg Gln Leu Val Cys Leu
 1425 1430 1435 1440
 Ala Arg Ala Leu Leu Arg Lys Thr Lys Ile Leu Val Leu Asp Glu Ala
 1445 1450 1455
 Thr Ala Ala Val Asp Leu Glu Thr Asp Asp Leu Ile Gln Ser Thr Ile
 1460 1465 1470
 Arg Thr Gln Phe Glu Asp Cys Thr Val Leu Thr Ile Ala His Arg Leu
 1475 1480 1485

Asn Thr Ile Met Asp Tyr Thr Arg Val Ile Val Leu Asp Lys Gly Glu
 1490 1495 1500

Ile Gln Glu Tyr Gly Ala Pro Ser Asp Leu Leu Gln Gln Arg Gly Leu
 1505 1510 1515 1520

Phe Tyr Ser Met Ala Lys Asp Ala Gly Leu Val
 1525 1530

<210> 87

<211> 1515

<212> PRT

<213> Homo sapiens

<400> 87

Asp Trp Asn Val Thr Trp Asn Thr Ser Asn Pro Asp Phe Thr Lys Cys
 1 5 10 15

Phe Gln Asn Thr Val Leu Val Trp Val Pro Cys Phe Tyr Leu Trp Ala
 20 25 30

Cys Phe Pro Phe Tyr Phe Leu Tyr Leu Ser Arg His Asp Arg Gly Tyr
 35 40 45

Ile Gln Met Thr Pro Leu Asn Lys Thr Lys Thr Ala Leu Gly Phe Leu
 50 55 60

Leu Trp Ile Val Cys Trp Ala Asp Leu Phe Tyr Ser Phe Trp Glu Arg
 65 70 75 80

Ser Arg Gly Ile Phe Leu Ala Pro Val Phe Leu Val Ser Pro Thr Leu
 85 90 95

Leu Gly Ile Thr Thr Leu Leu Ala Thr Phe Leu Ile Gln Leu Glu Arg
 100 105 110

Arg Lys Gly Val Gln Ser Ser Gly Ile Met Leu Thr Phe Trp Leu Val
 115 120 125

Ala Leu Val Cys Ala Leu Ala Ile Leu Arg Ser Lys Ile Met Thr Ala
 130 135 140

Leu Lys Glu Asp Ala Gln Val Asp Leu Phe Arg Asp Ile Thr Phe Tyr
 145 150 155 160

Val Tyr Phe Ser Leu Leu Leu Ile Gln Leu Val Leu Ser Cys Phe Ser
 165 170 175

Asp Arg Ser Pro Leu Phe Ser Glu Thr Ile His Asp Pro Asn Pro Cys
 180 185 190

Pro Glu Ser Ser Ala Ser Phe Leu Ser Arg Ile Thr Phe Trp Trp Ile
 195 200 205

Thr Gly Leu Ile Val Arg Gly Tyr Arg Gln Pro Leu Glu Gly Ser Asp
 210 215 220

Leu	Trp	Ser	Leu	Asn	Lys	Glu	Asp	Thr	Ser	Glu	Gln	Val	Val	Pro	Val		
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Pro	Gln	Lys	Glu	Trp	Asn	Pro	Ser	Leu	Phe	Lys	Val	Leu	Tyr	Lys	Thr		
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Leu	Ala	Ile	Arg	Gln	Glu	Glu	Leu	Lys	Val	Leu	Lys	Lys	Ser	Ala	Tyr		
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 Arg Phe Pro Leu Asn Ile Leu Pro Met Val Ile Ser Ser Ile Val Gln
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 Ala Ser Val Ser Leu Lys Arg Leu Arg Ile Phe Leu Ser His Glu Glu
 595 600 605
 Leu Glu Pro Asp Ser Ile Glu Arg Arg Pro Val Lys Asp Gly Gly Gly
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 Thr Asn Ser Ile Thr Val Arg Asn Ala Thr Phe Thr Trp Ala Arg Ser
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 Asp Pro Pro Thr Leu Asn Gly Ile Thr Phe Ser Ile Pro Glu Gly Ala
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 Ser Ala Leu Leu Ala Glu Met Asp Lys Val Glu Gly His Val Ala Ile
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 Lys Gly Ser Val Ala Tyr Val Pro Gln Gln Ala Trp Ile Gln Asn Asp
 690 695 700
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 Tyr Arg Ser Val Ile Gln Ala Cys Ala Leu Leu Pro Asp Leu Glu Ile
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 Ser Gly Gly Gln Lys Gln Arg Val Ser Leu Ala Arg Ala Val Tyr Ser
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 Asn Ala Asp Ile Tyr Leu Phe Asp Asp Pro Leu Ser Ala Val Asp Ala
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 His Val Gly Lys His Ile Phe Glu Asn Val Ile Gly Pro Lys Gly Met
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 Pro Gln Val Asp Val Ile Ile Val Met Ser Gly Gly Lys Ile Ser Glu
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Met Gly Ser Tyr Gln Glu Leu Leu Ala Arg Asp Gly Ala Phe Ala Glu
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 Cys Ile Val Ile Leu Leu Ala Thr Pro Ile Ala Ala Ile Ile Ile Pro
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 Pro Leu Gly Leu Ile Tyr Phe Phe Val Gln Arg Phe Tyr Val Ala Ser
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Ser His Phe Asn Glu Thr Leu Leu Gly Val Ser Val Ile Arg Ala Phe
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 Glu Glu Gln Glu Arg Phe Ile His Gln Ser Asp Leu Lys Val Asp Glu
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 Asn Gln Lys Ala Tyr Tyr Pro Ser Ile Val Ala Asn Arg Trp Leu Ala
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 Asn Tyr Cys Leu Arg Tyr Arg Glu Asp Leu Asp Phe Val Leu Arg His
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 Ile Gly Leu His Asp Leu Arg Phe Lys Ile Thr Ile Ile Pro Gln Asp
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Phe Gln Asn Thr Val Leu Thr Trp Val Pro Cys Phe Tyr Leu Trp Ser
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Cys Phe Pro Leu Tyr Phe Phe Tyr Leu Ser Arg His Asp Arg Gly Tyr
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Ile Gln Met Thr His Leu Asn Lys Thr Lys Thr Ala Leu Gly Phe Phe
65 70 75 80

Leu Trp Ile Ile Cys Trp Ala Asp Leu Phe Tyr Ser Phe Trp Glu Arg
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Ser Gln Gly Val Leu Arg Ala Pro Val Leu Leu Val Ser Pro Thr Leu
100 105 110

Leu Gly Ile Thr Met Leu Leu Ala Thr Phe Leu Ile Gln Leu Glu Arg
115 120 125

Arg Lys Gly Val Gln Ser Ser Gly Ile Met Leu Thr Phe Trp Leu Val
130 135 140

Ala Leu Leu Cys Ala Leu Ala Ile Leu Arg Ser Lys Ile Ile Ser Ala
145 150 155 160

Leu Lys Lys Asp Ala His Val Asp Val Phe Arg Asp Ser Thr Phe Tyr
165 170 175

Leu Tyr Phe Thr Leu Val Leu Val Gln Leu Val Leu Ser Cys Phe Ser

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Pro	Glu	Ser	Ser	Ala	Ser	Phe	Leu	Ser	Arg	Ile	Thr	Phe	Trp	Trp	Ile		
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Val	Arg	Ile	Val	Tyr	Ala	Pro	Pro	Lys	Asp	Pro	Ser	Lys	Pro	Lys	Gly		
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Ser	Pro	His	Lys	Asp	Arg	Glu	Pro	Ser	Leu	Phe	Lys	Val	Leu	Tyr	Lys		
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Thr	Phe	Gly	Pro	Tyr	Phe	Leu	Met	Ser	Phe	Leu	Tyr	Lys	Ala	Leu	His		
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Phe	Val	Asn	Asp	Arg	Glu	Ala	Pro	Asp	Trp	Gln	Gly	Tyr	Phe	Tyr	Thr		
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Ala	Leu	Leu	Phe	Val	Ser	Ala	Cys	Leu	Gln	Thr	Leu	Ala	Leu	His	Gln		
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Tyr	Phe	His	Ile	Cys	Phe	Val	Ser	Gly	Met	Arg	Ile	Lys	Thr	Ala	Val		
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Val	Gly	Ala	Val	Tyr	Arg	Lys	Ala	Leu	Leu	Ile	Thr	Asn	Ala	Ala	Arg		
405						410						415					
Lys	Ser	Ser	Thr	Val	Gly	Glu	Ile	Val	Asn	Leu	Met	Ser	Val	Asp	Ala		
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Gln	Arg	Phe	Met	Asp	Leu	Ala	Thr	Tyr	Ile	Asn	Met	Ile	Trp	Ser	Ala		
435						440						445					
Pro	Leu	Gln	Val	Ile	Leu	Ala	Leu	Tyr	Phe	Leu	Trp	Leu	Ser	Leu	Gly		
450						455						460					
Pro	Ser	Val	Leu	Ala	Gly	Val	Ala	Val	Met	Ile	Leu	Met	Val	Pro	Leu		
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Asn	Ala	Val	Met	Ala	Met	Lys	Thr	Lys	Thr	Tyr	Gln	Val	Ala	His	Met		

485										490					495				
Lys	Ser	Lys	Asp	Asn	Arg	Ile	Lys	Leu	Met	Asn	Glu	Ile	Leu	Asn	Gly				
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Ile	Lys	Val	Leu	Lys	Leu	Tyr	Ala	Trp	Glu	Leu	Ala	Phe	Gln	Asp	Lys				
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Tyr	Leu	Ala	Ala	Val	Gly	Thr	Phe	Thr	Trp	Val	Cys	Thr	Pro	Phe	Leu				
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Glu	Pro	Pro	Thr	Leu	Asn	Gly	Ile	Thr	Phe	Ser	Ile	Pro	Glu	Gly	Ala				
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Pro Gln Val Asp	Val Ile Ile Val Met Ser	Gly Gly Lys Ile Ser Glu				
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Met Gly Ser Tyr	Gln Glu Leu Leu Asp Arg	Asp Gly Ala Phe Ala Glu				
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Phe Leu Arg Thr	Tyr Ala Asn Ala Glu Gln	Asp Leu Ala Ser Glu Asp				
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Asp Ser Val Ser	Gly Ser Gly Lys Glu Ser	Lys Pro Val Glu Asn Gly				
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Met Leu Val Thr	Asp Thr Val Gly Lys His	Leu Gln Arg His Leu Ser				
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Ala Glu Leu Gln	Lys Ala Gly Ala Lys Glu	Glu Thr Trp Lys Leu Met				
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Asn Tyr Met Lys	Ala Ile Gly Leu Phe Ile	Thr Phe Leu Ser Ile Phe				
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Ala Tyr Tyr Pro Ser Ile	Val Ala Asn Arg Trp	Leu Ala Val Arg Leu
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His Asn Leu Arg Phe Lys	Ile Thr Ile Ile Pro	Gln Asp Pro Val Leu
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Phe Glu Asp Cys Thr Val Leu Thr Ile Ala His Arg Leu Asn Thr Ile		
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<212> DNA

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Gly Ser Cys Cys Arg Leu Arg Tyr Cys Arg Thr Cys Ser Pro Glu Thr
 1 5 10 15

Ser Phe Ser Leu Ser Lys Glu Ala Pro Arg Glu His Leu Asp His Gln
 20 25 30

Ala Ala His Gln Pro Phe Pro Arg Pro Arg Phe Arg Gln Glu Thr Gly
 35 40 45

His Pro Ser Leu Gln Arg Asp Phe Pro Arg Ser Phe Leu Leu Asp Leu
 50 55 60

Pro Asn Phe Pro Asp Leu Ser Lys Ala Asp Ile Asn Gly Gln Asn Pro
 65 70 75 80

Asn Ile Gln Val Thr Ile Glu Val Val Asp Gly Pro Asp Ser Glu Ala
 85 90 95

Asp Lys Asp Gln His Pro Glu Asn Lys Pro Ser Trp Ser Val Pro Ser
 100 105 110

Pro Asp Trp Arg Ala Trp Trp Gln Arg Ser Leu Ser Leu Ala Arg Ala
 115 120 125

Asn Ser Gly Asp Gln Asp Tyr Lys Tyr Asp Ser Thr Ser Asp Asp Ser
 130 135 140

Asn Phe Leu Asn Pro Pro Arg Gly Trp Asp His Thr Ala Pro Gly His
 145 150 155 160

Arg Thr Phe Glu Thr Lys Asp Gln Pro Glu Tyr Asp Ser Thr Asp Gly
 165 170 175

Glu Gly Asp Trp Ser Leu Trp Ser Val Cys Ser Val Thr Cys Gly Asn
 180 185 190

Gly Asn Gln Lys Arg Thr Arg Ser Cys Gly Tyr Ala Cys Thr Ala Thr
 195 200 205

Glu Ser Arg Thr Cys Asp Arg Pro Asn Cys Pro Ala Cys Thr Gly Phe
 210 215 220

Leu Ile Val Lys Glu Ala Trp Leu Gly Val Val Val Trp His Val Pro

225		230		235		240
Ala Pro Pro Thr Gly	Asn Pro Ser Val	Pro Leu Pro Glu Val	Phe Leu			
	245		250		255	
Trp Thr Arg Ala Gln	Leu Arg Met Asn	Ala Gln Gly Ile	Pro Ser Trp			
	260		265		270	
Lys Ser Arg Thr Ser	Pro Leu Ser Val	Met Asn Gly Ser	Trp Trp Ile			
	275		280		285	
Lys Thr Gln Ile Pro	Ile Asn Lys Asn	Lys Ser Gly Leu	Ser Lys Glu			
	290		295		300	
Arg Ile Tyr Ser Lys	Asp Tyr Cys Arg	Glu Ala Arg Asp	Val Ile Ser			
	305		310		315	320
Leu Leu Leu Gln Trp	Asp Glu Arg Cys	Asp His Lys Ile	Cys Lys His			
	325		330		335	
Leu Lys Glu Gln Pro	Gly Val Thr Cys	Ser Leu Lys His	Leu Leu Trp			
	340		345		350	
Ala Gly Cys Thr Arg	Gly Glu Arg Val	Ser Leu Trp Pro	Phe Pro Asp			
	355		360		365	
Thr Asp Ser Cys Glu	Arg Trp Met Ser	Phe Lys Ala Arg	Phe Leu Lys			
	370		375		380	
Lys Tyr Met His Lys	Val Met Asn Asp	Leu Pro Ser Cys	Pro Cys Ser			
	385		390		395	400
Tyr Pro Thr Glu Val	Ala Tyr Ser Thr	Ala Asp Ile Phe	Asp Arg Ile			
	405		410		415	
Lys Arg Lys Asp Phe	Arg Trp Lys Asp	Ala Ser Gly Pro	Lys Glu Lys			
	420		425		430	
Leu Glu Ile Tyr Lys	Pro Thr Ala Arg	Tyr Cys Ile Arg	Ser Met Leu			
	435		440		445	
Ser Leu Glu Ser Thr	Thr Leu Ala Ala	Gln His Cys Cys	Tyr Gly Asp			
	450		455		460	
Asn Met Gln Leu Ile	Thr Arg Gly Lys	Gly Ala Gly Thr	Pro Asn Leu			
	465		470		475	480
Ile Ser Thr Glu Phe	Ser Ala Glu Leu	His Tyr Lys Val	Asp Val Leu			
	485		490		495	
Pro Trp Ile Ile Cys	Lys Gly Asp Trp	Ser Arg Tyr Asn	Glu Ala Arg			
	500		505		510	
Pro Pro Asn Asn Gly	Gln Lys Cys Thr	Glu Ser Pro Ser	Asp Glu Asp			
	515		520		525	
Tyr Ile Lys Gln Phe	Gln Glu Ala Arg	Glu Tyr				

<210> 91
 <211> 1238
 <212> DNA
 <213> Homo sapiens

<400> 91
 gtacgtgtag tcttgaaacc agctttttctc tctccaaaga agcaccaagg gagcatctgg 60
 accaccaggc tgcacaccaa cctttcccca gaccgcgatt ccgacaagag acgggggcacc 120
 cttcattgca aagagatttc cccagatcct ttctccttga tctaccaaac tttccagatc 180
 tttccaaagc tgatatcaat gggcagaatc caaatatcca ggtcaccata gaggtgggtcg 240
 acggtcctga ctctgaagca gataaagatc agcatccgga gaataagccc agctgggtcag 300
 tcccattccc cgactggcgg gcttgggtggc agaggtccct gtccttggcc aggggcaaaca 360
 gcgggggacca ggactacaag tacgacagta cctcagacga cagcaacttc ctcaaccccc 420
 ccaggggggtg ggaccataca gccccaggcc accggacttt tgaaaccaa gatcagccag 480
 aatatgattc cacagatggc gaggggtgact ggagtctctg gtctgtctgc agcgtcacct 540
 gcggggaacgg caaccagaaa cggaccgggt cttgtggcta cgcgtgcaact gcaacagaat 600
 cgaggacctg tgaccgtcca aactgcccag gaattgaaga cacttttagg acagctgcca 660
 ccgaagttag tctgcttgcg ggaagcgagg agtttaatgc caccaaactg tttgaagttg 720
 acacagacag ctgtgagcgc tggatgagct gcaaaagcga gttcttaaag aagtacatgc 780
 acaaggtgat gaatgacctg cccagctgcc cctgctccta cccactgag gtggcctaca 840
 gcacggctga catcttcgac cgcatacagc gcaaggactt ccgctggaag gacgccagcg 900
 ggcccaagga gaagctggag atctacaagc ccactgcccg gtactgcatc cgctccatgc 960
 tgtccctgga gagcaccacg ctggcgccac agcactgctg ctacggcgac aacatgcagc 1020
 tcatcaccag gggcaagggg gcgggcacgc ccaacctcat cggcaccgag ttctccgcgg 1080
 agctccacta caaggtggac gtctgacct ggattatctg caaggggtgac tggagcaggt 1140
 ataacgaggc ccggcctccc aacaacggac aggagtgcac agagagcccc tcggacgagg 1200
 actacatcaa gcagttccaa gaggccaggg aatattaa 1238

<210> 92
 <211> 411
 <212> PRT
 <213> Homo sapiens

<400> 92
 Thr Cys Ser Pro Glu Thr Ser Phe Ser Leu Ser Lys Glu Ala Pro Arg
 1 5 10 15
 Glu His Leu Asp His Gln Ala Ala His Gln Pro Phe Pro Arg Pro Arg
 20 25 30
 Phe Arg Gln Glu Thr Gly His Pro Ser Leu Gln Arg Asp Phe Pro Arg
 35 40 45
 Ser Phe Leu Leu Asp Leu Pro Asn Phe Pro Asp Leu Ser Lys Ala Asp
 50 55 60
 Ile Asn Gly Gln Asn Pro Asn Ile Gln Val Thr Ile Glu Val Val Asp
 65 70 75 80
 Gly Pro Asp Ser Glu Ala Asp Lys Asp Gln His Pro Glu Asn Lys Pro
 85 90 95
 Ser Trp Ser Val Pro Ser Pro Asp Trp Arg Ala Trp Trp Gln Arg Ser

100					105					110					
Leu	Ser	Leu	Ala	Arg	Ala	Asn	Ser	Gly	Asp	Gln	Asp	Tyr	Lys	Tyr	Asp
		115					120					125			
Ser	Thr	Ser	Asp	Asp	Ser	Asn	Phe	Leu	Asn	Pro	Pro	Arg	Gly	Trp	Asp
	130					135					140				
His	Thr	Ala	Pro	Gly	His	Arg	Thr	Phe	Glu	Thr	Lys	Asp	Gln	Pro	Glu
145					150					155					160
Tyr	Asp	Ser	Thr	Asp	Gly	Glu	Gly	Asp	Trp	Ser	Leu	Trp	Ser	Val	Cys
				165					170					175	
Ser	Val	Thr	Cys	Gly	Asn	Gly	Asn	Gln	Lys	Arg	Thr	Arg	Ser	Cys	Gly
			180					185					190		
Tyr	Ala	Cys	Thr	Ala	Thr	Glu	Ser	Arg	Thr	Cys	Asp	Arg	Pro	Asn	Cys
	195						200					205			
Pro	Gly	Ile	Glu	Asp	Thr	Phe	Arg	Thr	Ala	Ala	Thr	Glu	Val	Ser	Leu
	210					215					220				
Leu	Ala	Gly	Ser	Glu	Glu	Phe	Asn	Ala	Thr	Lys	Leu	Phe	Glu	Val	Asp
225				230						235					240
Thr	Asp	Ser	Cys	Glu	Arg	Trp	Met	Ser	Cys	Lys	Ser	Glu	Phe	Leu	Lys
			245						250					255	
Lys	Tyr	Met	His	Lys	Val	Met	Asn	Asp	Leu	Pro	Ser	Cys	Pro	Cys	Ser
		260						265					270		
Tyr	Pro	Thr	Glu	Val	Ala	Tyr	Ser	Thr	Ala	Asp	Ile	Phe	Asp	Arg	Ile
	275						280					285			
Lys	Arg	Lys	Asp	Phe	Arg	Trp	Lys	Asp	Ala	Ser	Gly	Pro	Lys	Glu	Lys
	290					295					300				
Leu	Glu	Ile	Tyr	Lys	Pro	Thr	Ala	Arg	Tyr	Cys	Ile	Arg	Ser	Met	Leu
305				310						315					320
Ser	Leu	Glu	Ser	Thr	Thr	Leu	Ala	Ala	Gln	His	Cys	Cys	Tyr	Gly	Asp
			325						330					335	
Asn	Met	Gln	Leu	Ile	Thr	Arg	Gly	Lys	Gly	Ala	Gly	Thr	Pro	Asn	Leu
		340						345					350		
Ile	Gly	Thr	Glu	Phe	Ser	Ala	Glu	Leu	His	Tyr	Lys	Val	Asp	Val	Leu
	355						360					365			
Pro	Trp	Ile	Ile	Cys	Lys	Gly	Asp	Trp	Ser	Arg	Tyr	Asn	Glu	Ala	Arg
	370					375					380				
Pro	Pro	Asn	Asn	Gly	Gln	Glu	Cys	Thr	Glu	Ser	Pro	Ser	Asp	Glu	Asp
385				390						395				400	
Tyr	Ile	Lys	Gln	Phe	Gln	Glu	Ala	Arg	Glu	Tyr					

<210> 93
 <211> 391
 <212> PRT
 <213> Homo sapiens

<400> 93

His	Gln	Ala	Ala	His	Gln	Pro	Phe	Pro	Arg	Pro	Arg	Phe	Arg	Gln	Glu
1				5					10					15	
Thr	Gly	His	Pro	Ser	Leu	Gln	Arg	Asp	Phe	Pro	Arg	Ser	Phe	Leu	Leu
			20					25					30		
Asp	Leu	Pro	Asn	Phe	Pro	Asp	Leu	Ser	Lys	Ala	Asp	Ile	Asn	Gly	Gln
		35					40					45			
Asn	Pro	Asn	Ile	Gln	Val	Thr	Ile	Glu	Val	Val	Asp	Gly	Pro	Asp	Ser
	50					55					60				
Glu	Ala	Asp	Lys	Asp	Gln	His	Pro	Glu	Asn	Lys	Pro	Ser	Trp	Ser	Val
65					70					75					80
Pro	Ser	Pro	Asp	Trp	Arg	Ala	Trp	Trp	Gln	Arg	Ser	Leu	Ser	Leu	Ala
				85					90					95	
Arg	Ala	Asn	Ser	Gly	Asp	Gln	Asp	Tyr	Lys	Tyr	Asp	Ser	Thr	Ser	Asp
			100					105					110		
Asp	Ser	Asn	Phe	Leu	Asn	Pro	Pro	Arg	Gly	Trp	Asp	His	Thr	Ala	Pro
		115					120					125			
Gly	His	Arg	Thr	Phe	Glu	Thr	Lys	Asp	Gln	Pro	Glu	Tyr	Asp	Ser	Thr
	130						135				140				
Asp	Gly	Glu	Gly	Asp	Trp	Ser	Leu	Trp	Ser	Val	Cys	Ser	Val	Thr	Cys
145					150					155					160
Gly	Asn	Gly	Asn	Gln	Lys	Arg	Thr	Arg	Ser	Cys	Gly	Tyr	Ala	Cys	Thr
			165						170					175	
Ala	Thr	Glu	Ser	Arg	Thr	Cys	Asp	Arg	Pro	Asn	Cys	Pro	Gly	Ile	Glu
			180					185					190		
Asp	Thr	Phe	Arg	Thr	Ala	Ala	Thr	Glu	Val	Ser	Leu	Leu	Ala	Gly	Ser
		195					200					205			
Glu	Glu	Phe	Asn	Ala	Thr	Lys	Leu	Phe	Glu	Val	Asp	Thr	Asp	Ser	Cys
	210					215					220				
Glu	Arg	Trp	Met	Ser	Cys	Lys	Ser	Glu	Phe	Leu	Lys	Lys	Tyr	Met	His
225					230					235					240
Lys	Val	Met	Asn	Asp	Leu	Pro	Ser	Cys	Pro	Cys	Ser	Tyr	Pro	Thr	Glu
			245						250					255	

Val Ala Tyr Ser Thr Ala Asp Ile Phe Asp Arg Ile Lys Arg Lys Asp
 260 265 270
 Phe Arg Trp Lys Asp Ala Ser Gly Pro Lys Glu Lys Leu Glu Ile Tyr
 275 280 285
 Lys Pro Thr Ala Arg Tyr Cys Ile Arg Ser Met Leu Ser Leu Glu Ser
 290 295 300
 Thr Thr Leu Ala Ala Gln His Cys Cys Tyr Gly Asp Asn Met Gln Leu
 305 310 315 320
 Ile Thr Arg Gly Lys Gly Ala Gly Thr Pro Asn Leu Ile Ser Thr Glu
 325 330 335
 Phe Ser Ala Glu Leu His Tyr Lys Val Asp Val Leu Pro Trp Ile Ile
 340 345 350
 Cys Lys Gly Asp Trp Ser Arg Tyr Asn Glu Ala Arg Pro Pro Asn Asn
 355 360 365
 Gly Gln Lys Cys Thr Glu Ser Pro Ser Asp Glu Asp Tyr Ile Lys Gln
 370 375 380
 Phe Gln Glu Ala Arg Glu Tyr
 385 390

<210> 94

<211> 658

<212> PRT

<213> Homo sapiens

<400> 94

Met Arg Ala Leu Arg Asp Arg Ala Gly Leu Leu Leu Cys Val Leu Leu
 1 5 10 15
 Leu Ala Ala Leu Leu Glu Ala Ala Leu Gly Leu Pro Val Lys Lys Pro
 20 25 30
 Arg Leu Arg Gly Pro Arg Pro Gly Ser Leu Thr Arg Leu Ala Glu Val
 35 40 45
 Ser Gly Gly Gly Thr Gly Leu Arg Ser Ala Leu Ser Val Pro Pro Pro
 50 55 60
 Gln Pro Ala Gly Ser Ser Arg Ala Gly Ser Gly Thr Gly Thr His Thr
 65 70 75 80
 Gly Ser Asp Pro Pro Met Glu Arg Gly Ala Gly Ala Gly Arg Lys Leu
 85 90 95
 Pro Asp Thr Gly Arg Cys Pro Val Thr Glu Gly Ser Thr Val Gln Leu
 100 105 110
 Ile Ala Pro Trp Asn Ala Ala Asp Val His Ser His Gly Asp Lys Asp
 115 120 125

Ser	Gln	Thr	Cys	Ile	Arg	Val	Ser	Ala	Ser	Pro	Asp	Pro	Arg	Pro	Leu	130	135	140	
Lys	Glu	Glu	Glu	Glu	Ala	Pro	Leu	Leu	Pro	Arg	Thr	His	Leu	Gln	Ala	145	150	155	160
Glu	Pro	His	Gln	His	Gly	Cys	Trp	Thr	Val	Thr	Glu	Pro	Ala	Ala	Met	165	170	175	
Thr	Pro	Gly	Asn	Ala	Thr	Pro	Pro	Arg	Thr	Pro	Glu	Val	Thr	Pro	Leu	180	185	190	
Arg	Leu	Glu	Leu	Gln	Lys	Leu	Pro	Gly	Leu	Ala	Asn	Thr	Thr	Leu	Ser	195	200	205	
Thr	Pro	Asn	Pro	Asp	Thr	Gln	Ala	Ser	Ala	Ser	Pro	Asp	Pro	Arg	Pro	210	215	220	
Leu	Arg	Glu	Glu	Glu	Glu	Ala	Arg	Leu	Leu	Pro	Arg	Thr	His	Leu	Gln	225	230	235	240
Ala	Glu	Leu	His	Gln	His	Gly	Cys	Trp	Thr	Val	Thr	Glu	Pro	Ala	Ala	245	250	255	
Leu	Thr	Pro	Gly	Asn	Ala	Thr	Pro	Pro	Arg	Thr	Gln	Glu	Val	Thr	Pro	260	265	270	
Leu	Leu	Leu	Glu	Leu	Gln	Lys	Leu	Pro	Glu	Leu	Val	His	Ala	Thr	Leu	275	280	285	
Ser	Thr	Pro	Asn	Pro	Asp	Asn	Gln	Val	Thr	Ile	Lys	Val	Val	Glu	Asp	290	295	300	
Pro	Gln	Ala	Glu	Val	Ser	Ile	Asp	Leu	Leu	Ala	Glu	Pro	Ser	Asn	Pro	305	310	315	320
Pro	Pro	Gln	Asp	Thr	Leu	Ser	Trp	Leu	Pro	Ala	Leu	Trp	Ser	Phe	Leu	325	330	335	
Trp	Gly	Asp	Tyr	Lys	Gly	Glu	Glu	Lys	Asp	Arg	Ala	Pro	Gly	Glu	Lys	340	345	350	
Gly	Glu	Glu	Lys	Glu	Glu	Asp	Glu	Asp	Tyr	Pro	Ser	Glu	Asp	Ile	Glu	355	360	365	
Gly	Glu	Asp	Gln	Glu	Asp	Lys	Glu	Glu	Asp	Glu	Glu	Glu	Gln	Ala	Leu	370	375	380	
Trp	Phe	Asn	Gly	Thr	Thr	Asp	Asn	Trp	Asp	Gln	Gly	Trp	Leu	Ala	Pro	385	390	395	400
Gly	Asp	Trp	Val	Phe	Lys	Asp	Ser	Val	Ser	Tyr	Asp	Tyr	Glu	Pro	Gln	405	410	415	
Lys	Glu	Trp	Ser	Pro	Trp	Ser	Pro	Cys	Ser	Gly	Asn	Cys	Ser	Thr	Gly	420	425	430	

Lys Gln Gln Arg Thr Arg Pro Cys Gly Tyr Gly Cys Thr Ala Thr Glu
 435 440 445
 Thr Arg Thr Cys Asp Leu Pro Ser Cys Pro Gly Thr Glu Asp Lys Asp
 450 455 460
 Thr Leu Gly Leu Pro Ser Glu Glu Trp Lys Leu Leu Ala Arg Asn Ala
 465 470 475 480
 Thr Asp Met His Asp Gln Asp Val Asp Ser Cys Glu Lys Trp Leu Asn
 485 490 495
 Cys Lys Ser Asp Phe Leu Ile Lys Tyr Leu Ser Gln Met Leu Arg Asp
 500 505 510
 Leu Pro Ser Cys Pro Cys Ala Tyr Pro Leu Glu Ala Met Asp Ser Pro
 515 520 525
 Val Ser Leu Gln Asp Glu His Gln Gly Arg Ser Phe Arg Trp Arg Asp
 530 535 540
 Ala Ser Gly Pro Arg Glu Arg Leu Asp Ile Tyr Gln Pro Thr Ala Arg
 545 550 555 560
 Phe Cys Leu Arg Ser Met Leu Ser Gly Glu Ser Ser Thr Leu Ala Ala
 565 570 575
 Gln His Cys Cys Tyr Asp Glu Asp Ser Arg Leu Leu Thr Arg Gly Lys
 580 585 590
 Gly Ala Gly Met Pro Asn Leu Ile Ser Thr Asp Phe Ser Pro Lys Leu
 595 600 605
 His Phe Lys Phe Asp Thr Thr Pro Trp Ile Leu Cys Lys Gly Asp Trp
 610 615 620
 Ser Arg Leu His Ala Val Leu Pro Pro Asn Asn Gly Arg Ala Cys Thr
 625 630 635 640
 Asp Asn Pro Leu Glu Glu Glu Tyr Leu Ala Gln Leu Gln Glu Ala Lys
 645 650 655
 Glu Tyr

<210> 95
 <211> 60
 <212> PRT
 <213> Homo sapiens

<400> 95
 Asn Asn Leu Asn Val Gly Ser Asp Thr Thr Ser Glu Thr Ser Phe Ser
 1 5 10 15

Leu Ser Lys Glu Ala Pro Arg Glu His Leu Asp His Gln Ala Ala His

Asp	Pro	Phe	Cys	Val	Ala	Trp	Ser	Tyr	Asn	Ala	Thr	Leu	Ser	Glu	Gly	225	230	235	240
Pro	Asp	Ser	Val	Gly	Phe	Ser	Arg	Glu	Tyr	Arg	Pro	Cys	Tyr	Thr	His	245	250	255	
Arg	Phe	Ala	Ser	Gly	Cys	Gln	Ala	Leu	Ala	Pro	Gly	Trp	Val	Ser	Gly	260	265	270	
Asn	Lys	Tyr	Thr	Arg	Asp	Val	Asp	Cys	Glu	Thr	Gly	Thr	Cys	Ile	His	275	280	285	
Asn	Glu	Trp	Ser	Ser	Trp	Thr	Thr	Cys	Lys	Asp	Pro	Cys	Ser	Asn	Thr	290	295	300	
Glu	Thr	Met	Ser	Arg	Asn	Arg	Thr	Val	Lys	Ser	Val	Ser	Gln	Asn	Trp	305	310	315	320
Ala	Ser	Thr	Thr	Cys	Arg	Asp	Glu	Ser	Gln	Ile	Gln	Leu	Cys	Ser	Glu	325	330	335	
Asn	Pro	Gln	Ser	Ile	Glu	Thr	Cys	Lys	Thr	Cys	Leu	Val	Gly	Ser	Trp	340	345	350	
Ser	Glu	Trp	Ser	Asp	Cys	Ser	Thr	Ser	Cys	Gly	Glu	Gly	Asn	Arg	Ile	355	360	365	
Arg	Thr	Arg	Glu	Ser	Thr	Lys	Pro	Pro	Leu	Asn	Gly	Asp	Glu	Ser	Thr	370	375	380	
Cys	Pro	Glu	Leu	Ile	Ala	Lys	Glu	Ser	Cys	Asn	Lys	Asp	Val	Glu	Cys	385	390	395	400
Pro	Asn	Ile	Gln	Cys	Glu	Leu	Gly	Glu	Trp	Ser	Ser	Trp	Ser	Pro	Cys	405	410	415	
Ser	Val	Thr	Cys	Gly	Ser	Gly	Thr	Thr	Ser	Arg	Asn	Arg	Glu	Val	Lys	420	425	430	
Gly	Glu	Asn	Cys	Thr	Glu	Leu	Pro	Thr	Glu	Ser	Lys	Lys	Cys	Asn	Leu	435	440	445	
Ala	Asn	Cys	Gly	Asp	Asn	Ser	Ala	Ser	Cys	Thr	Ala	Val	Met	Ser	Val	450	455	460	
Trp	Ser	Glu	Trp	Ser	Ala	Cys	Ser	Glu	Lys	Cys	Asp	Gln	Gly	Leu	Val	465	470	475	480
Arg	Arg	Tyr	Arg	Asp	Phe	Asp	Phe	Ser	Lys	Ile	Gly	Val	Phe	Gly	Tyr	485	490	495	
Val	Pro	Pro	Gly	Lys	Ser	Glu	Glu	Gln	Asn	Lys	Val	Arg	Glu	Ile	Cys	500	505	510	
Lys	Asp	Thr	Pro	Thr	Leu	Glu	Glu	Glu	Pro	Cys	Thr	Ser	Gly	Val	Thr	515	520	525	

Cys Thr Pro Gly Cys Lys Tyr Thr Glu Trp Ser Ala Trp Ser Ser Cys
 530 535 540
 Asp Cys Ser Gly Ser Gln Thr Arg Asp Arg Val Val Thr Phe Pro Glu
 545 550 555 560
 Gly Ile Ile Asp Ala Ile Cys Gln Ser Ser Lys Asp Thr Arg Ser Cys
 565 570 575
 Ser Lys Pro Glu Gly Cys Thr Glu Thr Thr Pro Asp Ser Gly Asp Ala
 580 585 590
 Thr Leu Ala Ile Ala Ile Gly Leu Pro Val Gly Ile Leu Gly Leu Cys
 595 600 605
 Ile Ile Ala Gly Ser Leu Phe Leu Ile Gly Gly Arg Ser Gly Asn Gln
 610 615 620
 Glu Glu Asp Glu Thr Ser Tyr Gln Tyr Phe Asp Gln Pro Ser Ala Ala
 625 630 635 640
 Leu Asp Gln Asp Ser Glu Tyr Val Gln Glu Ile Gly Pro Glu Ser Gln
 645 650 655
 Asn Trp Ala Ser
 660

<210> 97
 <211> 831
 <212> PRT
 <213> Homo sapiens

<400> 97
 Met Gly Leu Ala Trp Gly Leu Gly Val Leu Phe Leu Met His Val Cys
 1 5 10 15
 Gly Thr Asn Arg Ile Pro Glu Ser Gly Gly Asp Asn Ser Val Phe Asp
 20 25 30
 Ile Phe Glu Leu Thr Gly Ala Ala Arg Lys Gly Ser Gly Arg Arg Leu
 35 40 45
 Val Lys Gly Pro Asp Pro Ser Ser Pro Ala Phe Arg Ile Glu Asp Ala
 50 55 60
 Asn Leu Ile Pro Pro Val Pro Asp Asp Lys Phe Gln Asp Leu Val Asp
 65 70 75 80
 Ala Val Arg Thr Glu Lys Gly Phe Leu Leu Leu Ala Ser Leu Arg Gln
 85 90 95
 Met Lys Lys Thr Arg Gly Thr Leu Leu Ala Leu Glu Arg Lys Asp His
 100 105 110
 Ser Gly Gln Val Phe Ser Val Val Ser Asn Gly Lys Ala Gly Thr Leu
 115 120 125

Asp	Leu	Ser	Leu	Thr	Val	Gln	Gly	Lys	Gln	His	Val	Val	Ser	Val	Glu	130	135	140	
Glu	Ala	Leu	Leu	Ala	Thr	Gly	Gln	Trp	Lys	Ser	Ile	Thr	Leu	Phe	Val	145	150	155	160
Gln	Glu	Asp	Arg	Ala	Gln	Leu	Tyr	Ile	Asp	Cys	Glu	Lys	Met	Glu	Asn	165	170	175	
Ala	Glu	Leu	Asp	Val	Pro	Ile	Gln	Ser	Val	Phe	Thr	Arg	Asp	Leu	Ala	180	185	190	
Ser	Ile	Ala	Arg	Leu	Arg	Ile	Ala	Lys	Gly	Gly	Val	Asn	Asp	Asn	Phe	195	200	205	
Gln	Gly	Val	Leu	Gln	Asn	Val	Arg	Phe	Val	Phe	Gly	Thr	Thr	Pro	Glu	210	215	220	
Asp	Ile	Leu	Arg	Asn	Lys	Gly	Cys	Ser	Ser	Ser	Thr	Ser	Val	Leu	Leu	225	230	235	240
Thr	Leu	Asp	Asn	Asn	Val	Val	Asn	Gly	Ser	Ser	Pro	Ala	Ile	Arg	Thr	245	250	255	
Asn	Tyr	Ile	Gly	His	Lys	Thr	Lys	Asp	Leu	Gln	Ala	Ile	Cys	Gly	Ile	260	265	270	
Ser	Cys	Asp	Glu	Leu	Ser	Ser	Met	Val	Leu	Glu	Leu	Arg	Gly	Leu	Arg	275	280	285	
Thr	Ile	Val	Thr	Thr	Leu	Gln	Asp	Ser	Ile	Arg	Lys	Val	Thr	Glu	Glu	290	295	300	
Asn	Lys	Glu	Leu	Ala	Asn	Glu	Leu	Arg	Arg	Pro	Pro	Leu	Cys	Tyr	His	305	310	315	320
Asn	Gly	Val	Gln	Tyr	Arg	Asn	Asn	Glu	Glu	Trp	Thr	Val	Asp	Ser	Cys	325	330	335	
Thr	Glu	Cys	His	Cys	Gln	Asn	Ser	Val	Thr	Ile	Cys	Lys	Lys	Val	Ser	340	345	350	
Cys	Pro	Ile	Met	Pro	Cys	Ser	Asn	Ala	Thr	Val	Pro	Asp	Gly	Glu	Cys	355	360	365	
Cys	Pro	Arg	Cys	Trp	Pro	Ser	Asp	Ser	Ala	Asp	Asp	Gly	Trp	Ser	Pro	370	375	380	
Trp	Ser	Glu	Trp	Thr	Ser	Cys	Ser	Thr	Ser	Cys	Gly	Asn	Gly	Ile	Gln	385	390	395	400
Gln	Arg	Gly	Arg	Ser	Cys	Asp	Ser	Leu	Asn	Asn	Arg	Cys	Glu	Gly	Ser	405	410	415	
Ser	Val	Gln	Thr	Arg	Thr	Cys	His	Ile	Gln	Glu	Cys	Asp	Lys	Arg	Phe	420	425	430	

Lys Gln Asp Gly Gly Trp Ser His Trp Ser Pro Trp Ser Ser Cys Ser
 435 440 445
 Val Thr Cys Gly Asp Gly Val Ile Thr Arg Ile Arg Leu Cys Asn Ser
 450 455 460
 Pro Ser Pro Gln Met Asn Gly Lys Pro Cys Glu Gly Glu Ala Arg Glu
 465 470 475 480
 Thr Lys Ala Cys Lys Lys Asp Ala Cys Pro Ile Asn Gly Gly Trp Gly
 485 490 495
 Pro Trp Ser Pro Trp Asp Ile Cys Ser Val Thr Cys Gly Gly Gly Val
 500 505 510
 Gln Lys Arg Ser Arg Leu Cys Asn Asn Pro Thr Pro Gln Phe Gly Gly
 515 520 525
 Lys Asp Cys Val Gly Asp Val Thr Glu Asn Gln Ile Cys Asn Lys Gln
 530 535 540
 Asp Cys Pro Ile Asp Gly Cys Leu Ser Asn Pro Cys Phe Ala Gly Val
 545 550 555 560
 Lys Cys Thr Ser Tyr Pro Asp Gly Ser Trp Lys Cys Gly Ala Cys Pro
 565 570 575
 Pro Gly Tyr Ser Gly Asn Gly Ile Gln Cys Thr Asp Val Asp Glu Cys
 580 585 590
 Lys Glu Val Pro Asp Ala Cys Phe Asn His Asn Gly Glu His Arg Cys
 595 600 605
 Glu Asn Thr Asp Pro Gly Tyr Asn Cys Leu Pro Cys Pro Pro Arg Phe
 610 615 620
 Thr Gly Ser Gln Pro Phe Gly Gln Gly Val Glu His Ala Thr Ala Asn
 625 630 635 640
 Lys Gln Val Cys Lys Pro Arg Asn Pro Cys Thr Asp Gly Thr His Asp
 645 650 655
 Cys Asn Lys Asn Ala Lys Cys Asn Tyr Leu Gly His Tyr Ser Asp Pro
 660 665 670
 Met Tyr Arg Cys Glu Cys Lys Pro Gly Tyr Ala Gly Asn Gly Ile Ile
 675 680 685
 Cys Gly Glu Asp Thr Asp Leu Asp Gly Trp Pro Asn Glu Asn Leu Val
 690 695 700
 Cys Val Ala Asn Ala Thr Tyr His Cys Lys Lys Asp Asn Cys Pro Asn
 705 710 715 720
 Leu Pro Asn Ser Gly Gln Glu Asp Tyr Asp Lys Asp Gly Ile Gly Asp
 725 730 735

Ala Cys Asp Asp Asp Asp Asp Asn Asp Lys Ile Pro Asp Asp Arg Asp
740 745 750

Asn Cys Pro Phe His Tyr Asn Pro Ala Gln Tyr Asp Tyr Asp Arg Asp
755 760 765

Asp Val Gly Asp Arg Cys Asp Asn Cys Pro Tyr Asn His Asn Pro Asp
770 775 780

Gln Ala Asp Thr Asp Asn Asn Gly Glu Gly Asp Ala Cys Ala Ala Asp
785 790 795 800

Ile Asp Gly Asp Gly Ile Leu Asn Glu Arg Asp Asn Cys Gln Tyr Val
805 810 815

Tyr Asn Val Asp Gln Arg Asp Thr Asp Met Asp Gly Val Gly Asp
820 825 830

<210> 98

<211> 831

<212> PRT

<213> Mus musculus

<400> 98

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20 25 30

Ile Phe Glu Leu Ile Gly Gly Ala Arg Arg Gly Pro Gly Arg Arg Leu
35 40 45

Val Lys Gly Gln Asp Leu Ser Ser Pro Ala Phe Arg Ile Glu Asn Ala
50 55 60

Asn Leu Ile Pro Ala Val Pro Asp Asp Lys Phe Gln Asp Leu Leu Asp
65 70 75 80

Ala Val Trp Ala Asp Lys Gly Phe Ile Phe Leu Ala Ser Leu Arg Gln
85 90 95

Met Lys Lys Thr Arg Gly Thr Leu Leu Ala Val Glu Arg Lys Asp Asn
100 105 110

Thr Gly Gln Ile Phe Ser Val Val Ser Asn Gly Lys Ala Gly Thr Leu
115 120 125

Asp Leu Ser Leu Ser Leu Pro Gly Lys Gln Gln Val Val Ser Val Glu
130 135 140

Glu Ala Leu Leu Ala Thr Gly Gln Trp Lys Ser Ile Thr Leu Phe Val
145 150 155 160

Gln Glu Asp Arg Ala Gln Leu Tyr Ile Asp Cys Asp Lys Met Glu Ser

165										170					175				
Ala	Glu	Leu	Asp	Val	Pro	Ile	Gln	Ser	Ile	Phe	Thr	Arg	Asp	Leu	Ala				
			180					185						190					
Ser	Val	Ala	Arg	Leu	Arg	Val	Ala	Lys	Gly	Asp	Val	Asn	Asp	Asn	Phe				
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Gln	Gly	Val	Leu	Gln	Asn	Val	Arg	Phe	Val	Phe	Gly	Thr	Thr	Pro	Glu				
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Asp	Ile	Leu	Arg	Asn	Lys	Gly	Cys	Ser	Ser	Ser	Thr	Asn	Val	Leu	Leu				
225					230					235					240				
Thr	Leu	Asp	Asn	Asn	Val	Val	Asn	Gly	Ser	Ser	Pro	Ala	Ile	Arg	Thr				
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Asn	Tyr	Ile	Gly	His	Lys	Thr	Lys	Asp	Leu	Gln	Ala	Ile	Cys	Gly	Leu				
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Ser	Cys	Asp	Glu	Leu	Ser	Ser	Met	Val	Leu	Glu	Leu	Lys	Gly	Leu	Arg				
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Thr	Ile	Val	Thr	Thr	Leu	Gln	Asp	Ser	Ile	Arg	Lys	Val	Thr	Glu	Glu				
	290					295					300								
Asn	Arg	Glu	Leu	Val	Ser	Glu	Leu	Lys	Arg	Pro	Pro	Leu	Cys	Phe	His				
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Asn	Gly	Val	Gln	Tyr	Lys	Asn	Asn	Glu	Glu	Trp	Thr	Val	Asp	Ser	Cys				
			325						330					335					
Thr	Glu	Cys	His	Cys	Gln	Asn	Ser	Val	Thr	Ile	Cys	Lys	Lys	Val	Ser				
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		370				375					380								
Trp	Ser	Glu	Trp	Thr	Ser	Cys	Ser	Ala	Thr	Cys	Gly	Asn	Gly	Ile	Gln				
385					390					395				400					
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Ser	Val	Gln	Thr	Arg	Thr	Cys	His	Ile	Gln	Glu	Cys	Asp	Lys	Arg	Phe				
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Lys	Gln	Asp	Gly	Gly	Trp	Ser	His	Trp	Ser	Pro	Trp	Ser	Ser	Cys	Ser				
		435					440					445							
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Pro	Ser	Pro	Gln	Met	Asn	Gly	Lys	Pro	Cys	Glu	Gly	Glu	Ala	Arg	Glu				

465		470		475		480
Thr Lys Ala Cys	Lys Lys Asp Ala Cys	Pro Ile Asn Gly Gly Trp Gly				
	485	490			495	
Pro Trp Ser	Pro Trp Asp Ile Cys	Ser Val Thr Cys Gly Gly Gly Val				
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Gln Arg Arg	Ser Arg Leu Cys	Asn Asn Pro Thr Pro Gln Phe Gly Gly				
	515	520			525	
Lys Asp Cys	Val Gly Asp Val Thr Glu Asn Gln Val Cys Asn Lys Gln					
	530	535			540	
Asp Cys Pro	Ile Asp Gly Cys Leu Ser Asn Pro Cys Phe Ala Gly Ala					
	545	550			555	560
Lys Cys Thr	Ser Tyr Pro Asp Gly Ser Trp Lys Cys Gly Ala Cys Pro					
	565	570			575	
Pro Gly Tyr	Ser Gly Asn Gly Ile Gln Cys Lys Asp Val Asp Glu Cys					
	580	585			590	
Lys Glu Val	Pro Asp Ala Cys Phe Asn His Asn Gly Glu His Arg Cys					
	595	600			605	
Lys Asn Thr	Asp Pro Gly Tyr Asn Cys Leu Pro Cys Pro Pro Arg Phe					
	610	615			620	
Thr Gly Ser	Gln Pro Phe Gly Arg Gly Val Glu His Ala Met Ala Asn					
	625	630			635	640
Lys Gln Val	Cys Lys Pro Arg Asn Pro Cys Thr Asp Gly Thr His Asp					
	645	650			655	
Cys Asn Lys	Asn Ala Lys Cys Asn Tyr Leu Gly His Tyr Ser Asp Pro					
	660	665			670	
Met Tyr Arg	Cys Glu Cys Lys Pro Gly Tyr Ala Gly Asn Gly Ile Ile					
	675	680			685	
Cys Gly Glu	Asp Thr Asp Leu Asp Gly Trp Pro Asn Glu Asn Leu Val					
	690	695			700	
Cys Val Ala	Asn Ala Thr Tyr His Cys Lys Lys Asp Asn Cys Pro Asn					
	705	710			715	720
Leu Pro Asn	Ser Gly Gln Glu Asp Tyr Asp Lys Asp Gly Ile Gly Asp					
	725	730			735	
Ala Cys Asp	Asp Asp Asp Asp Asn Asp Lys Ile Pro Asp Asp Arg Asp					
	740	745			750	
Asn Cys Pro	Phe His Tyr Asn Pro Ala Gln Tyr Asp Tyr Asp Arg Asp					
	755	760			765	
Asp Val Gly	Asp Arg Cys Asp Asn Cys Pro Tyr Asn His Asn Pro Asp					

770

775

780

Gln Ala Asp Thr Asp Lys Asn Gly Glu Gly Asp Ala Cys Ala Val Asp
785 790 795 800

Ile Asp Gly Asp Gly Ile Leu Asn Glu Arg Asp Asn Cys Gln Tyr Val
805 810 815

Tyr Asn Val Asp Gln Arg Asp Thr Asp Met Asp Gly Val Gly Asp
820 825 830

<210> 99

<211> 2760

<212> DNA

<213> Homo sapiens

<400> 99

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<210> 100

<211> 206

<212> PRT

<213> Homo sapiens

<400> 100

Met Gln Cys Asp Ala Lys Phe Asp Phe Leu Thr Arg Lys His His Cys
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Arg Arg Cys Gly Lys Cys Phe Cys Asp Arg Cys Cys Ser Gln Lys Val
 20 25 30

Pro Leu Arg Arg Met Cys Phe Val Asp Pro Val Arg Gln Cys Ala Glu
 35 40 45

Cys Ala Leu Val Ser Leu Lys Glu Ala Glu Phe Tyr Asp Lys Gln Leu
 50 55 60

Lys Val Leu Leu Ser Gly Ala Thr Phe Leu Val Thr Phe Gly Asn Ser
 65 70 75 80

Glu Lys Pro Glu Thr Met Thr Cys Arg Leu Ser Asn Asn Gln Arg Tyr
 85 90 95

Leu Phe Leu Asp Gly Asp Ser His Tyr Glu Ile Glu Ile Val His Ile
 100 105 110

Ser Thr Val Gln Ile Leu Thr Glu Gly Phe Pro Pro Gly Glu Lys Asp
 115 120 125

Ile His Ala Tyr Thr Ser Leu Arg Gly Ser Gln Pro Ala Ser Glu Gly
 130 135 140

Gly Asn Ala Arg Ala Thr Gly Met Phe Leu Gln Tyr Thr Val Pro Gly
 145 150 155 160

Thr Glu Gly Val Thr Gln Leu Lys Leu Thr Val Val Glu Asp Val Thr
 165 170 175

Val Gly Arg Arg Gln Ala Val Ala Trp Leu Val Ile Cys Arg Leu Pro
 180 185 190

Ser Ser Ser Met Asn Leu Gly Thr Ser Asn Ser Thr Trp Gly
 195 200 205

<210> 101

<211> 673

<212> DNA

<213> Homo sapiens

<400> 101

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gtgctgcagc cagaagggtgc cgctgcggcg catgtgcttt gtggacccccg tgcggcagtg 180
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cgcacaggcc acaggcatgt tcctgcagta tacagtgccg gggacggagg gtgtgacca 540
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<210> 102

<211> 202

<212> PRT

<213> Homo sapiens

<400> 102

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Met Gln Cys Asp Ala Lys Phe Asp Phe Leu Thr Arg Lys His His Cys
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Arg Arg Cys Gly Lys Cys Phe Cys Asp Arg Cys Cys Ser Gln Lys Val
      20             25             30

Pro Leu Arg Arg Met Cys Phe Val Asp Pro Val Arg Gln Cys Ala Glu
      35             40             45

Cys Ala Leu Val Ser Leu Lys Glu Ala Glu Phe Tyr Asp Lys Gln Leu
      50             55             60

Lys Val Leu Leu Ser Gly Ala Thr Phe Leu Val Thr Phe Gly Asn Ser
      65             70             75             80

Glu Lys Pro Glu Thr Met Thr Cys Arg Leu Ser Asn Asn Gln Arg Tyr
      85             90             95

Leu Phe Leu Asp Gly Asp Ser His Tyr Glu Ile Glu Ile Val His Ile
      100            105            110

Ser Thr Val Gln Ile Leu Thr Glu Gly Phe Pro Pro Gly Glu Lys Asp
      115            120            125

Ile His Ala Tyr Thr Ser Leu Arg Gly Ser Gln Pro Ala Ser Glu Gly
      130            135            140

Gly Asn Ala Gln Ala Thr Gly Met Phe Leu Gln Tyr Thr Val Pro Gly
      145            150            155            160

Thr Glu Gly Val Thr Gln Leu Lys Leu Thr Val Val Glu Asp Val Thr
      165            170            175
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Val Gly Arg Arg Gln Ala Val Ala Trp Leu Val Ala Met His Lys Ala
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Ala Lys Leu Leu Tyr Glu Ser Arg Asp Gln
195 200

<210> 103
<211> 234
<212> PRT
<213> Homo sapiens

<400> 103
Met Ser Ser Glu Val Ser Ala Arg Arg Asp Ala Lys Lys Leu Val Arg
1 5 10 15

Ser Pro Ser Gly Leu Arg Met Val Pro Glu His Arg Ala Phe Gly Ser
20 25 30

Pro Phe Gly Leu Glu Glu Pro Gln Trp Val Pro Asp Lys Glu Cys Arg
35 40 45

Arg Cys Met Gln Cys Asp Ala Lys Phe Asp Phe Leu Thr Arg Lys His
50 55 60

His Cys Arg Arg Cys Gly Lys Cys Phe Cys Asp Arg Cys Cys Ser Gln
65 70 75 80

Lys Val Pro Leu Arg Arg Met Cys Phe Val Asp Pro Val Arg Gln Cys
85 90 95

Ala Glu Cys Ala Leu Val Ser Leu Lys Glu Ala Glu Phe Tyr Asp Lys
100 105 110

Gln Leu Lys Val Leu Leu Ser Gly Ala Thr Phe Leu Val Thr Phe Gly
115 120 125

Asn Ser Glu Lys Pro Glu Thr Met Thr Cys Arg Leu Ser Asn Asn Gln
130 135 140

Arg Tyr Leu Phe Leu Asp Gly Asp Ser His Tyr Glu Ile Glu Ile Val
145 150 155 160

His Ile Ser Thr Val Gln Ile Leu Thr Glu Gly Phe Pro Pro Gly Gly
165 170 175

Gly Asn Ala Arg Ala Thr Gly Met Phe Leu Gln Tyr Thr Val Pro Gly
180 185 190

Thr Glu Gly Val Thr Gln Leu Lys Leu Thr Val Val Glu Asp Val Thr
195 200 205

Val Gly Arg Arg Gln Ala Val Ala Trp Leu Val Ala Met His Lys Ala
210 215 220

Ala Lys Leu Leu Tyr Glu Ser Arg Asp Gln
225 230

<210> 104
 <211> 212
 <212> PRT
 <213> Mus musculus

<400> 104
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 35 40 45
 Lys Cys Phe Cys Asp Arg Cys Cys Ser Gln Lys Val Pro Leu Arg Arg
 50 55 60
 Met Cys Phe Val Asp Pro Val Arg Gln Cys Ala Asp Cys Ala Leu Val
 65 70 75 80
 Ser His Arg Glu Ala Glu Phe Tyr Asp Lys Gln Leu Lys Val Leu Leu
 85 90 95
 Ser Gly Ala Thr Phe Leu Val Thr Phe Gly Asp Ser Glu Lys Pro Glu
 100 105 110
 Thr Met Val Cys Arg Leu Ser Asn Asn Gln Arg Cys Leu Val Leu Asp
 115 120 125
 Gly Asp Ser His Arg Glu Ile Glu Ile Ala His Val Cys Thr Val Gln
 130 135 140
 Ile Leu Thr Glu Gly Phe Thr Pro Gly Ala Gly Ser Thr Leu Ala Thr
 145 150 155 160
 Gly Met Leu Leu Gln Tyr Thr Val Pro Gly Ala Glu Ala Ala Ala Gln
 165 170 175
 Leu Arg Leu Met Ala Gly Glu Asp Ala Ser Gly Ser Lys Arg Gln Ala
 180 185 190
 Ala Ala Trp Leu Ala Ala Met His Lys Ala Thr Lys Leu Leu Tyr Glu
 195 200 205
 Ser Arg Asp Gln
 210

<210> 105
 <211> 327
 <212> PRT
 <213> Homo sapiens

<400> 105

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 Ser Ala Arg Arg Ala Ala Cys Arg Ala Tyr Ser Gly Pro Arg Thr Cys
 35 40 45
 Pro Ala His Leu Pro Ala Ala Arg Ser Ala Leu Arg Ala Ser Leu Ala
 50 55 60
 Ser Leu Pro Ala Thr Ala Arg Gly Leu Arg Pro Cys Leu Arg Val Arg
 65 70 75 80
 Pro Ala Pro Gln Pro Gly Pro Gly Ala Ala Leu Arg Arg Ala Arg Ala
 85 90 95
 Ala Arg Ser Pro Ala Arg Ala Gly Ala Ala Met Met Asn Arg Phe Arg
 100 105 110
 Lys Trp Leu Tyr Lys Pro Lys Arg Ser Asp Pro Gln Leu Leu Ala Arg
 115 120 125
 Phe Tyr Tyr Ala Asp Glu Glu Leu Asn Gln Val Ala Ala Glu Leu Asp
 130 135 140
 Ser Leu Asp Gly Arg Lys Asp Pro Gln Arg Cys Thr Leu Leu Val Ser
 145 150 155 160
 Gln Phe Arg Ser Cys Gln Asp Asn Val Leu Asn Ile Ile Asn Gln Ile
 165 170 175
 Met Asp Glu Cys Ile Pro Gln Asp Arg Ala Pro Arg Asp Phe Cys Val
 180 185 190
 Lys Phe Pro Glu Glu Ile Arg His Asp Asn Leu Ala Gly Gln Leu Trp
 195 200 205
 Phe Gly Ala Glu Cys Leu Ala Ala Gly Ser Ile Ile Met Asn Arg Glu
 210 215 220
 Leu Glu Ser Met Ala Met Arg Pro Leu Ala Lys Glu Leu Thr Arg Ser
 225 230 235 240
 Leu Glu Asp Val Arg Gly Ala Leu Arg Asp Gln Ala Leu Arg Asp Leu
 245 250 255
 Asn Thr Tyr Thr Glu Lys Met Arg Glu Ala Leu Arg His Phe Asp Val
 260 265 270
 Leu Phe Ala Glu Phe Glu Leu Ser Tyr Val Ser Ala Met Val Pro Val
 275 280 285
 Lys Ser Pro Arg Glu Tyr Tyr Val Gln Gln Glu Val Ile Val Leu Phe
 290 295 300

Cys Glu Thr Val Glu Arg Ala Leu Asp Phe Gly Tyr Leu Thr Gln Asp
 305 310 315 320

Met Ile Asp Asp Tyr Glu Pro
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<210> 106
 <211> 173
 <212> PRT
 <213> Homo sapiens

<400> 106
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 1 5 10 15

Ser Ser Pro Asp Gln Pro Ser Arg Ser His Leu Asp Asp Asp Gly Met
 20 25 30

Pro Val Tyr Thr Asp Thr Ile Gln Gln Arg Leu Arg Gln Ile Glu Ser
 35 40 45

Gly His Gln Gln Glu Val Glu Thr Leu Lys Lys Gln Val Gln Glu Leu
 50 55 60

Lys Ser Arg Leu Glu Ser Gln Tyr Leu Thr Ser Ser Leu Arg Phe Asn
 65 70 75 80

Gly Asp Phe Gly Asp Glu Val Met Thr Arg Trp Leu Pro Asp His Leu
 85 90 95

Ala Ala His Cys Tyr Ala Cys Asp Ser Ala Phe Trp Leu Ala Ser Arg
 100 105 110

Lys His His Cys Arg Asn Cys Gly Asn Val Phe Cys Ser Ser Cys Cys
 115 120 125

Asn Gln Lys Val Pro Val Pro Ser Gln Gln Leu Phe Glu Pro Ser Arg
 130 135 140

Val Cys Lys Ser Cys Tyr Ser Ser Leu His Pro Thr Ser Ser Ser Ile
 145 150 155 160

Asp Leu Glu Leu Asp Lys Pro Ile Ala Ala Thr Ser Asn
 165 170

<210> 107
 <211> 597
 <212> PRT
 <213> Mus musculus

<400> 107
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35					40					45						
Phe	Val	Asn	Leu	Phe	Arg	Phe	Asn	Lys	Glu	Arg	Gly	Glu	Gly	Gly	Gln	
50					55					60						
Gly	Glu	Gln	Gln	Ser	Pro	Ser	Ser	Ser	Trp	Ala	Ser	Pro	Gln	Ile	Pro	
65					70					75					80	
Ser	Arg	Thr	Gln	Ser	Val	Arg	Ser	Pro	Val	Pro	Tyr	Lys	Lys	Gln	Leu	
85					90					95						
Asn	Glu	Glu	Leu	His	Arg	Arg	Ser	Ser	Val	Leu	Glu	Asn	Thr	Leu	Pro	
100					105					110						
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115					120					125						
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130					135					140						
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Asp	Cys	Ser	Glu	Lys	Phe	Thr	Thr	Phe	Arg	Arg	Arg	His	His	Cys	Arg	
180					185					190						
Leu	Cys	Gly	Gln	Ile	Phe	Cys	Ser	Arg	Cys	Cys	Asn	Gln	Glu	Ile	Pro	
195					200					205						
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210					215					220						
Arg	Lys	Ile	Ala	Leu	Ser	Tyr	Ala	His	Ser	Thr	Asp	Ser	Asn	Ser	Ile	
225					230					235					240	
Gly	Glu	Asp	Leu	Asn	Ala	Leu	Ser	Asp	Ser	Thr	Cys	Ser	Val	Ser	Ile	
245					250					255						
Leu	Asp	Pro	Ser	Glu	Pro	Arg	Thr	Pro	Val	Gly	Ser	Arg	Lys	Ala	Ser	
260					265					270						
Arg	Asn	Ile	Phe	Leu	Glu	Asp	Asp	Leu	Ala	Trp	Gln	Ser	Leu	Ile	His	
275					280					285						
Pro	Asp	Ser	Ser	Asn	Ser	Ala	Leu	Ser	Thr	Arg	Leu	Val	Ser	Val	Gln	
290					295					300						
Glu	Asp	Ala	Gly	Lys	Ser	Pro	Ala	Arg	Asn	Arg	Ser	Ala	Ser	Ile	Thr	
305					310					315					320	
Asn	Leu	Ser	Leu	Asp	Arg	Ser	Gly	Ser	Pro	Met	Val	Pro	Ser	Tyr	Glu	

				325						330					335
Thr	Ser	Val	Ser	Pro	Gln	Ala	Asn	Arg	Asn	Tyr	Ile	Arg	Thr	Glu	Thr
			340					345						350	
Thr	Glu	Asp	Glu	Arg	Lys	Ile	Leu	Leu	Asp	Ser	Ala	Gln	Leu	Lys	Asp
		355					360					365			
Leu	Trp	Lys	Lys	Ile	Cys	His	His	Thr	Ser	Gly	Met	Glu	Phe	Gln	Asp
	370					375					380				
His	Arg	Tyr	Trp	Leu	Arg	Thr	His	Pro	Asn	Cys	Ile	Val	Gly	Lys	Glu
385					390					395					400
Leu	Val	Asn	Trp	Leu	Ile	Arg	Asn	Gly	His	Ile	Ala	Thr	Arg	Ala	Gln
				405					410						415
Ala	Ile	Ala	Ile	Gly	Gln	Ala	Met	Val	Asp	Gly	Arg	Trp	Leu	Asp	Cys
			420					425						430	
Val	Ser	His	His	Asp	Gln	Leu	Phe	Arg	Asp	Glu	Tyr	Ala	Leu	Tyr	Arg
		435					440					445			
Pro	Leu	Gln	Ser	Thr	Glu	Phe	Ser	Glu	Thr	Pro	Ser	Pro	Asp	Ser	Asp
	450					455					460				
Ser	Val	Asn	Ser	Val	Glu	Gly	His	Ser	Glu	Pro	Ser	Trp	Phe	Lys	Asp
465					470					475					480
Ile	Lys	Phe	Asp	Asp	Ser	Asp	Thr	Glu	Gln	Ile	Ala	Glu	Glu	Gly	Asp
			485						490						495
Asp	Asn	Leu	Ala	Lys	Tyr	Leu	Val	Ser	Asp	Thr	Gly	Gly	Gln	Gln	Leu
			500					505						510	
Ser	Ile	Ser	Asp	Ala	Phe	Ile	Lys	Glu	Ser	Leu	Phe	Asn	Arg	Arg	Val
		515					520					525			
Glu	Glu	Lys	Ser	Lys	Glu	Leu	Pro	Phe	Thr	Pro	Leu	Gly	Trp	His	His
	530					535					540				
Asn	Asn	Leu	Glu	Leu	Leu	Arg	Glu	Glu	Asn	Glu	Glu	Lys	Gln	Ala	Met
545					550				555						560
Glu	Arg	Leu	Leu	Ser	Ala	Asn	His	Asn	His	Met	Met	Ala	Leu	Leu	Gln
				565					570						575
Gln	Leu	Leu	Gln	Asn	Glu	Ser	Leu	Ser	Ser	Ser	Trp	Arg	Asp	Ile	Ile
			580					585					590		
Val	Ser	Leu	Val	Cys											
			595												

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oligonucleotide primer

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24

<210> 109

<211> 24

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence:
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24

<210> 110

<211> 27

<212> DNA

<213> Artificial Sequence

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27

<210> 111

<211> 26

<212> DNA

<213> Artificial Sequence

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26

<210> 112

<211> 24

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oligonucleotide primer

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26

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22

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22

<210> 128

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 <210> 131
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<210> 139
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<210> 144
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